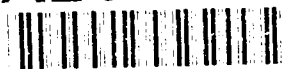


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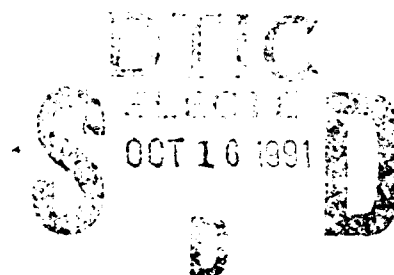


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PHASE II ARCHAEOLOGICAL AND GEOMORPHOLOGICAL INVESTIGATIONS AT THE PROPOSED GREENBELT PROJECT, DES MOINES, IOWA

Prepared for
Stanley Consultants
and the
Rock Island District, Corps of Engineers

AUTHORS:
James S. Ross
Jane K. Johnston
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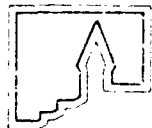
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Mary McCorvie



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AMERICAN
RESOURCES
GROUP, LTD.



CULTURAL RESOURCES MANAGEMENT
REPORT NO. 156

SEPTEMBER 1991

FINAL REPORT

Phase II Archaeological and
Geomorphological Investigations
for the proposed Plaza/Amphitheater
Des Moines Recreational River and Greenbelt
Des Moines, Iowa

Prepared by
American Resources Group, Ltd.

for
Stanley Consultants
and the Rock Island District
Corps Of Engineers

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ABSTRACT

Phase II archaeological and geomorphological investigations were conducted for the Rock Island District of the U.S. Army Corps of Engineers and the city of Des Moines at the proposed location for the Des Moines Recreational River and Greenbelt, Downtown Riverfront Plaza/Amphitheater in downtown Des Moines, Iowa.

Hand excavated test units and deep backhoe testing were carried out in order to evaluate the potential for buried historic properties, that if present, may be impacted by proposed construction activities.

Bricks, stone, concrete, and historic artifacts were recovered from a heavily disturbed context created by the razing of late 19th century buildings which occupied the eastern portion of the site, and fill was introduced to create landscape terraces, riverwalls, walks, and stairways during the early 20th century. It is therefore recommended that construction proceed without further evaluation of historic properties.

ACKNOWLEDGMENTS

The authors and staff at American Resources Group would like to thank the following people for their contributions and cooperation: Ron Deiss, and Perry Hubert, Rock Island District Corps of Engineers; Art and Ray Coons of J&R Drilling; Jim Grant and Pat Zingsheim of the City of Des Moines; Barbara A. Snedden, Genealogist; Vernon Tyler and other staff members at the Iowa State Historical Society; and Kim Hill and Mavis Warne for that great Iowa hospitality.

INTRODUCTION

The Rock Island District, U.S. Army Corps of Engineers and the city of Des Moines are proposing the development of the Des Moines Recreational River and Greenbelt, Downtown Riverfront Plaza/Amphitheater in Polk County, Iowa. The project area is approximately 1 acre of city-owned land within Section 4, Township 78 North, Range 24 West, (1956 Des Moines 7.5' U.S.G.S. quadrangle) and is bounded by Locust, Walnut, and East First Streets, and the Des Moines River in downtown Des Moines, Iowa (Figure 1). This report presents the findings of a Phase II archaeological and geomorphological investigation at the proposed construction site.

Impacts to the area include : the construction of a low profile landscape plaza and amphitheater (Figure 2), the construction of a metal arc mast for lighting and sound attachment; and the construction of a stage penetrating the Des Moines Riverwall and extending into the river channel. These impacts extend into the National Register of Historic Places (NRHP) Civic Center Historic District within the city of Des Moines.

The major constituents of the work order include : Phase II archaeological investigations sufficient to determine the location of subsurface historic properties within the project area which would be considered potentially significant according to NRHP criteria; documentary background research sufficient to identify the potential for buried historic properties, to aid in the excavation, and to determine project impacts; preparation of a high quality technical report on the

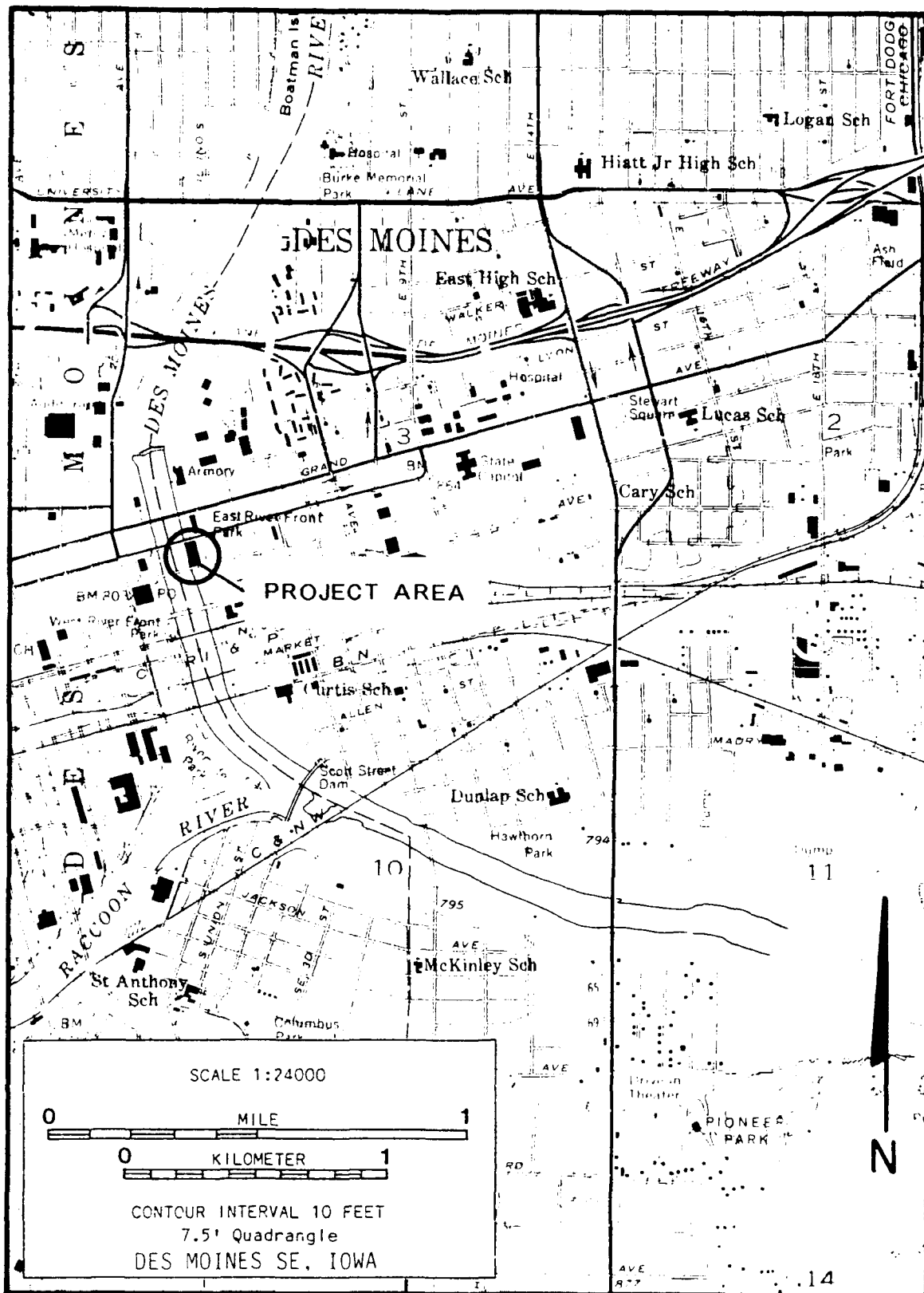


Figure 1. Location of project area

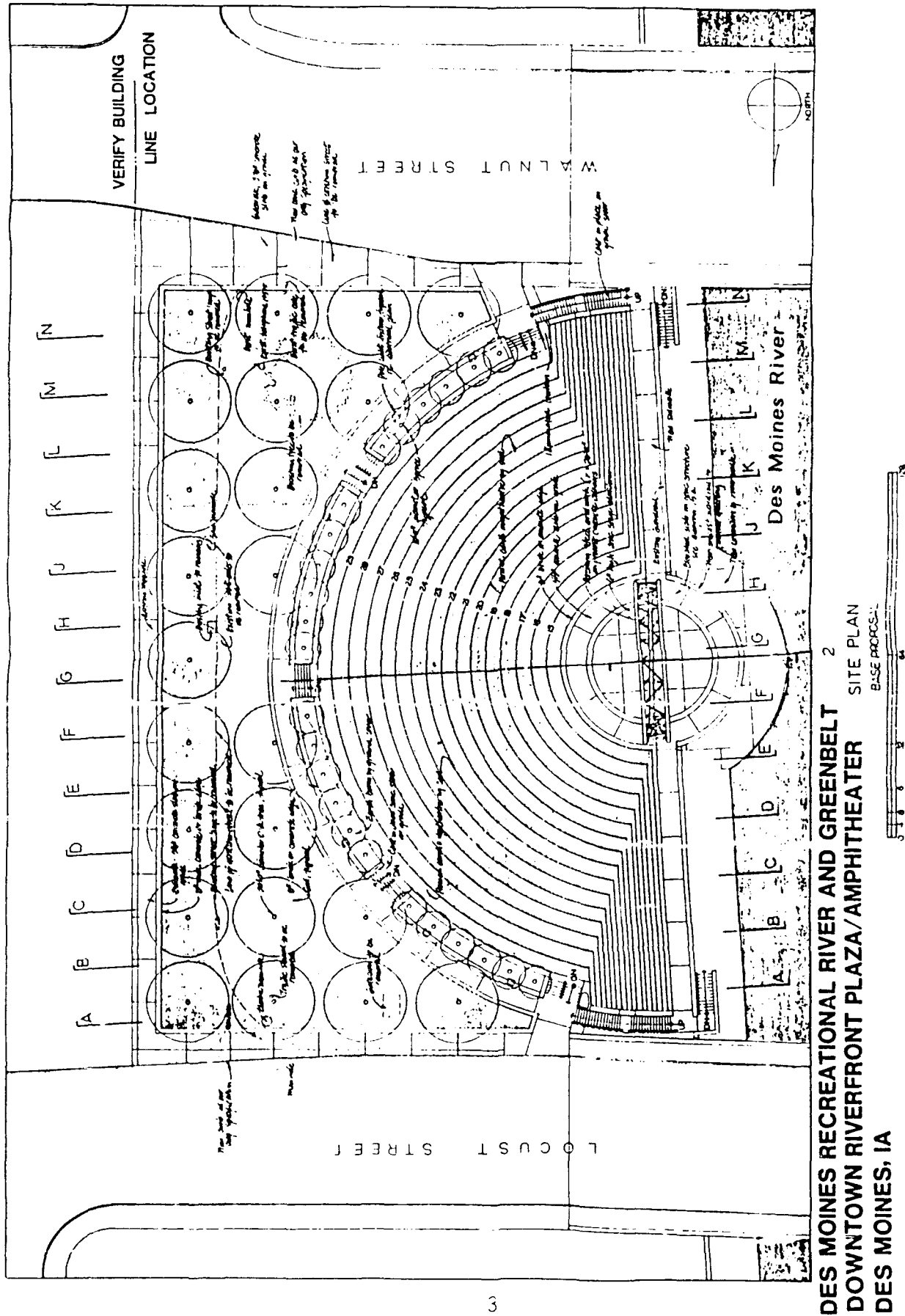


Figure 2. Impact of project construction.

archaeological and archaeomorphological results of the investigations which meets the Rock Island District, U.S. Army Corps of Engineers Scope of Work (Appendix A) and the Iowa State Historic Preservation Office draft guideline for Phase II archaeological investigations.

Authorization for these investigations is provided by the National Preservation Act (as amended in 1980), the Archaeological and Historic Preservation Act of 1974, Executive Order 11593, and Title 36 of the Code of Federal Regulations, Parts 60-66 and 800 as appropriate.

Archaeological and geomorphological investigations were carried out on 24 and 25 April, 1991. Principal Investigator was Michael J. McNerney, Supervising Archaeologist was James Ross assisted by James Balsitis, Mary McCorvie, Jane Johnston, and Jerry Mount. Wil Maring prepared the maps and illustrations. Jeff Anderson conducted the geomorphological investigation.

ENVIRONMENTAL SETTING

The city of Des Moines is located on the southernmost tip of the Central Lowland province Western lake section, as defined by Fenneman (1946). The Western lake section consisting of young glaciated plains with moraines, lakes, and lacustrine plains (Fenneman 1946) corresponds with the Des Moines Lobe landform region (Prior 1976). This division represents the southernmost advance of glaciation dating from the Wisconsin division of Pleistocene time. Its characteristic topography of ridges, hills, and swales are formed from the deposition of glacial till. These features parallel the lobed shape and represent the remnants of four moraine systems. The land surface ranges from flat to rolling to slightly irregular and has numerous metamorphic and igneous cobbles

scattered across its landscape. Another key feature of the Des Moines Lobe is the poor drainage. This results in the formation of glacial lakes, marshes, and sluggish streams. The associated soils are somewhat poorly to poorly drained silty and loamy sediments formed in alluvial settings, from glacial till, and of local alluvium from glacial till.

The city of Des Moines is located in the former mixed bluestem prairie and Oak-Hickory forest floral division (Kuchler 1975). This division is best characterized as tall-grass prairie with deciduous forests limited to larger stream valleys and big bluestem and slough grasses along with forbs and sedges confined to wetland environments. Presently the project area vegetation is limited to lawn grass.

ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The following brief history of Polk County and the city of Des Moines has been taken from J. M. Dixon's Centennial History of Polk County, Iowa (1876) unless otherwise noted.

Fort Des Moines, named for the river on which it was located, was established in 1843. A detachment of about 50 dragoons, including four officers, and 45 infantrymen were sent to a point on the Upper Des Moines, an area then known as "Raccoon Point" or "Raccoon Forks" (Pelzer 1917:94; Saunders and Donham 1982:5.3). These troops were ostensibly sent to protect the Sac and Fox Indians located at a temporary reservation from the Sioux Indians, however, their presence also served to discourage Euro-American settlement on reservation territory. Approximately 40 log buildings were constructed at Fort Des Moines on the west side of the river, extending from the confluence of the Raccoon and Des Moines Rivers, north to where Court Street is now,

and west to what is now Fifth Street. In 1846, after the "New Purchase" territory was opened up for American settlement, Fort Des Moines was vacated as a military post but many of the buildings remained standing for many years afterwards. After the garrison buildings were abandoned by the dragoons they were leased to immigrant families to serve as housing.

The town of Fort Des Moines was initially platted on July 8, 1846. Like the military post, the town was located on the west side of the river. Three years later the town of "Demoine" was laid out on the east side of the Des Moines river. In 1856 the prefix "Fort" was omitted from the town's name and it was incorporated with the town of Demoine to form the city of Des Moines. It originally extended four miles from east to west and two miles north to south. Des Moines was named the county seat of Polk County in 1846, and the state capitol in 1855.

Des Moines Greenbelt/Amphitheater Project Area

The Des Moines Greenbelt/Amphitheater project area was located in a parcel of land bounded by the Des Moines River, E. Locust, E. Walnut, and First (Front) Streets prior to 1884 (Figure 2). This parcel of land was designated block W, and further subdivided into seven lots. It is not known with certainty whether there was industrial development in block W during the mid-nineteenth century.

An 1854 map of the city of Des Moines, as well as an 1857 map of Des Moines, indicates little commercial activity within the study area (Figures 3 and 4). There is no indication of development on any of the seven lots in 1854 (Millar 1854).

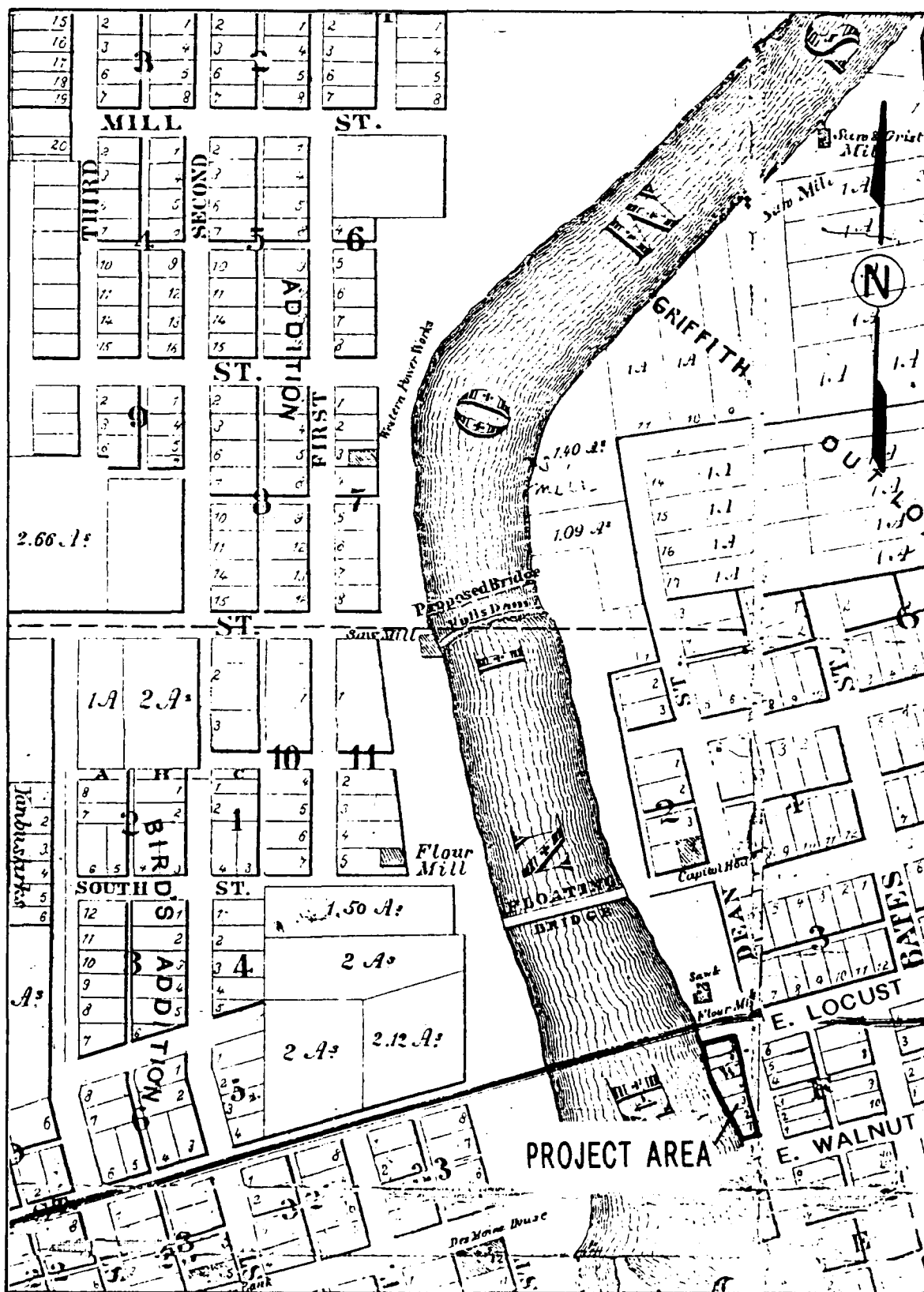


Figure 4. Project area located on 1857 map (Bausman and Company 1857).

Bausman and Co.'s 1857 map of the city of Des Moines also suggests there was little development within the project area at that time. The mill was still situated across Locust Street north of block W. In 1857 it was referred to as a saw and flour mill (Figure 4).

By 1884, the first date that fire insurance maps are available, several structures were present within the study area (Figure 5) (Sanborn Map Co. 1884). Block W was located in Scott and Dean's Addition which was originally platted on November 19, 1849 (Dixon 1876:259). Buildings situated on this block in 1884 included the Spencer & Buttler Sodawater factory on the northeast corner of the block with an adjacent coal storage facility, four dwellings facing east on First (Front) Street, a single dwelling located near the center of the block, another dwelling located near the northeast corner, a sewing machine factory or shop located on the southeast corner and several unnamed small structures located near the river's edge (Figure 5). Two other buildings, both of which were stables, were also present (Figure 5). An 1882 city directory of Des Moines located the Spencer and Buttler Bottling Works at 717 7th Street thereby indicating that the 1884 location was essentially new.

The block remained relatively unchanged over the next few years with the exception of the addition of the U.S. Express Co.'s stable, which was located in the middle of the block along First (Front) Street and the Novelty Iron Works and Machine Shop located at the southeast corner of the block (Figure 6) (Sanborn and Perris Map Co. 1891). In addition, the ownership of the sodawater factory changed from Spencer and Buttler to Seth Buttler.

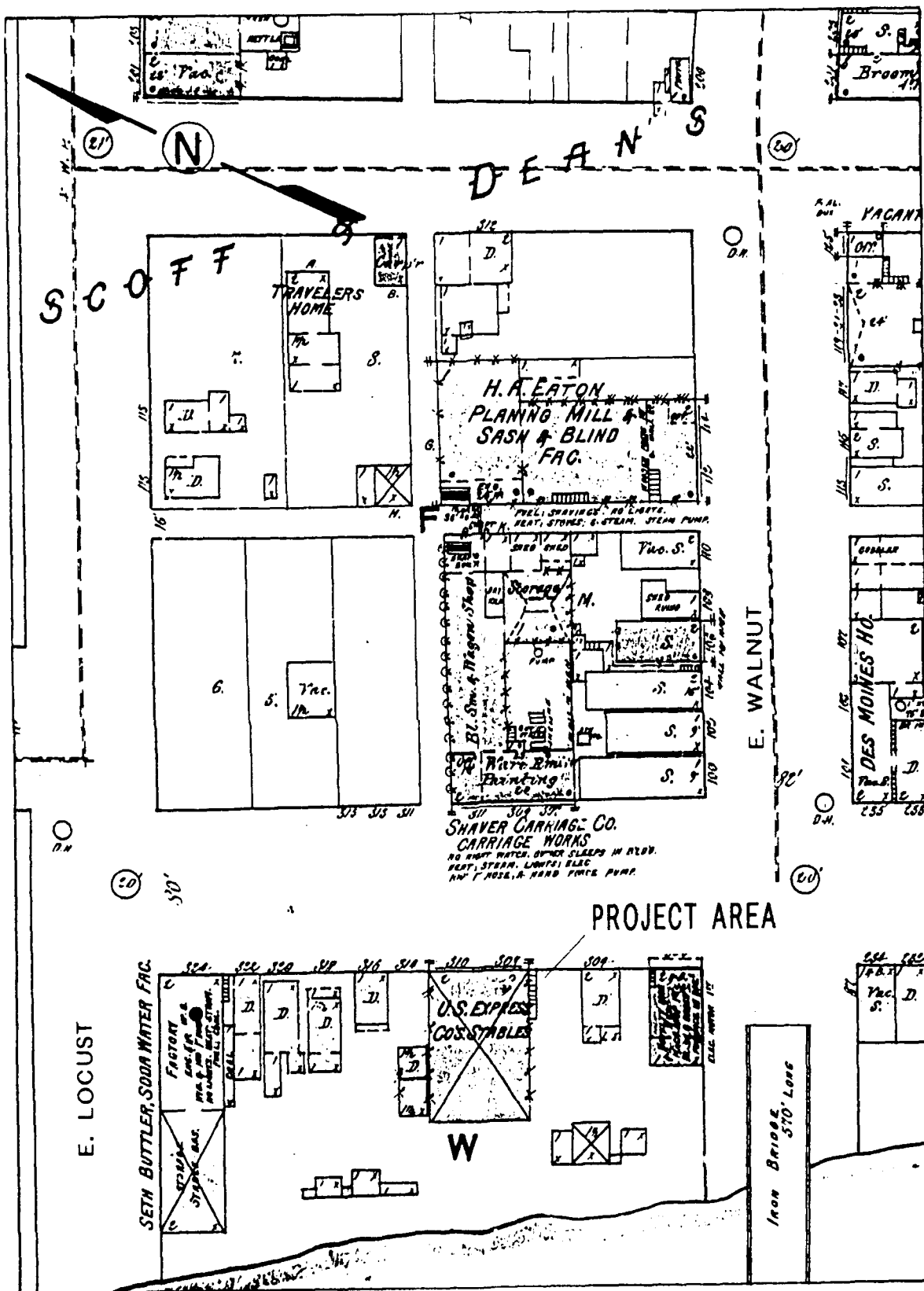


Figure 5. Project area located on 1884 map (Sanborn Fire Insurance Company 1884). Areas with X indicate stables.

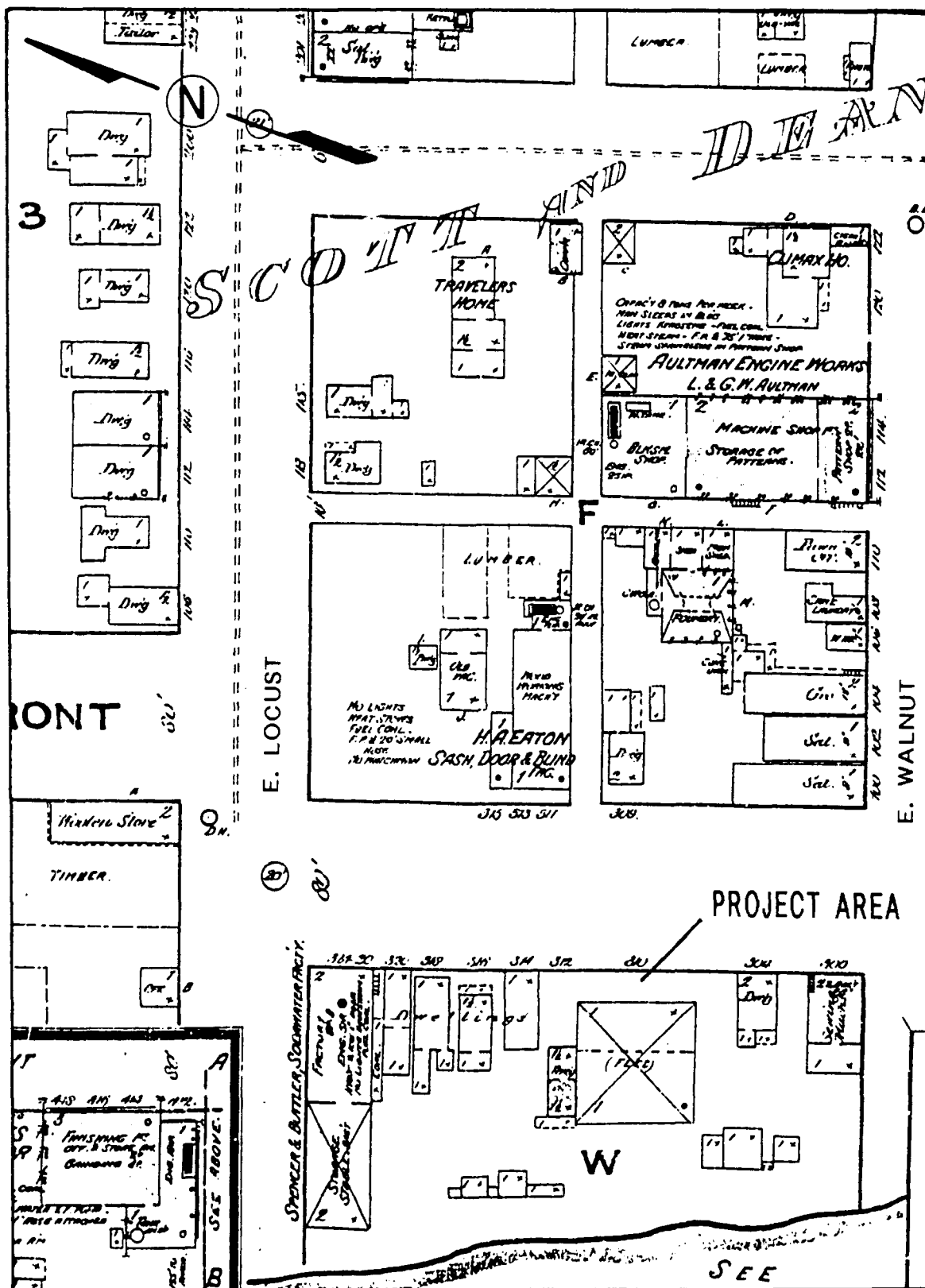


Figure 6. Project area located on 1891 map (Sanborn Fire Insurance Company 1891).

The block still retained the same character of partial development through the turn-of-the-century (Figure 7) (Sanborn and Perris Map Co. 1901). The stables located on the west side of the block on E. Locust Street appear to have been removed, and three other smaller buildings erected in its place (Figure 7). The sodawater factory again changed hands, being owned then by George E. Bryan and going by the name Excelsior Bottling works. There were three dwellings located along the north part of First (Front) Street. There was also a small structure located along the west side of the U.S. Express Stable. There were two other structures located between First (Front) Street and the shoreline, one of which appears to have been a stable (Figure 7). The character of the southeast corner of the block also changed somewhat. Another structure was built between the machine shop and the dwelling (Figure 7). The general lack of development in the project area may be related to serious flood damage in Des Moines in 1895, and again in the winter of 1902-1903 (National Register Nomination Form, Civic Center Historic District).

A 1907 map of the city of Des Moines documents the project area devoid of structures and with a probable levee running through it (Figure 8). The structures occupying the project area in 1901 must have been razed before 1907, and may have been used in the construction of the levee. By 1910 the area was known as East Riverside Park (Figure 9) and was completely vacant by 1920 (Figure 10).

Impacts to the project area beginning in the early part of the 20th century on up to the construction of the levee in 1967 have been severe. In addition to the razing of the structures between 1901 and 1907 mentioned above, bridge construction impacted the project area to a

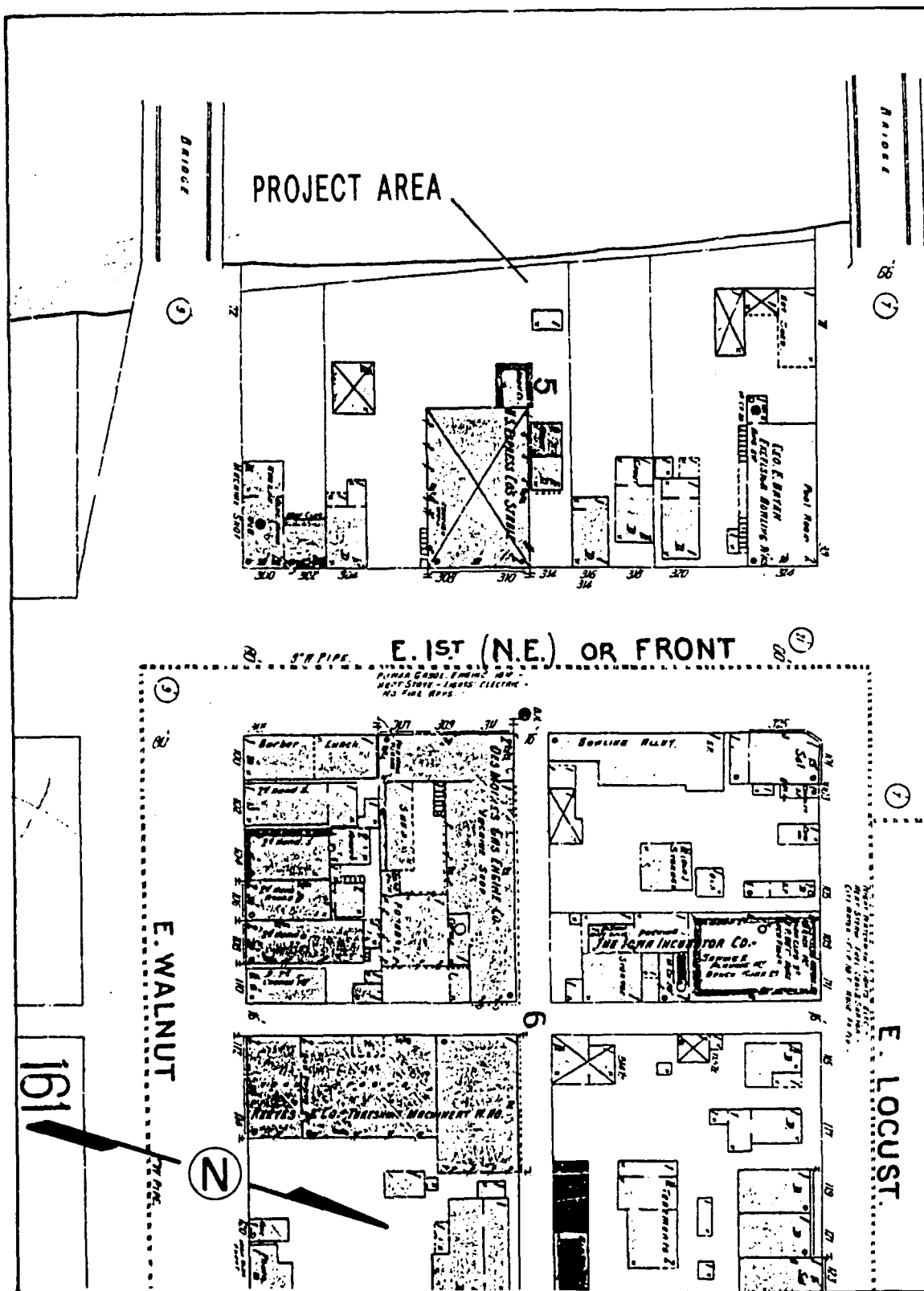


Figure 7. Project area located on 1901 map (Sanborn Fire Insurance Company 1901).

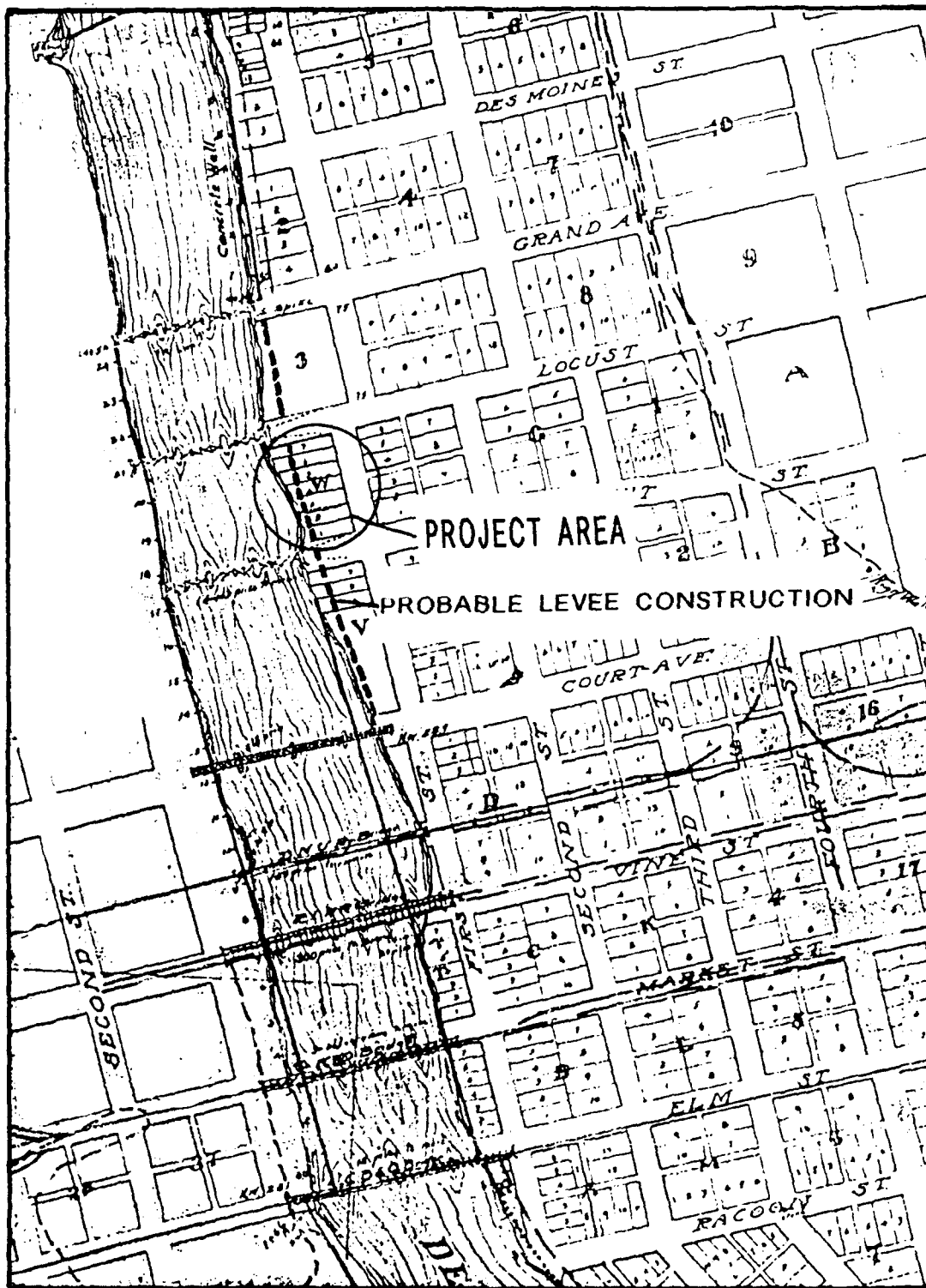


Figure 8. Project area located on 1907 Des Moines River Improvement map detailing the location of levees and excavations (City Engineers Office 1907).

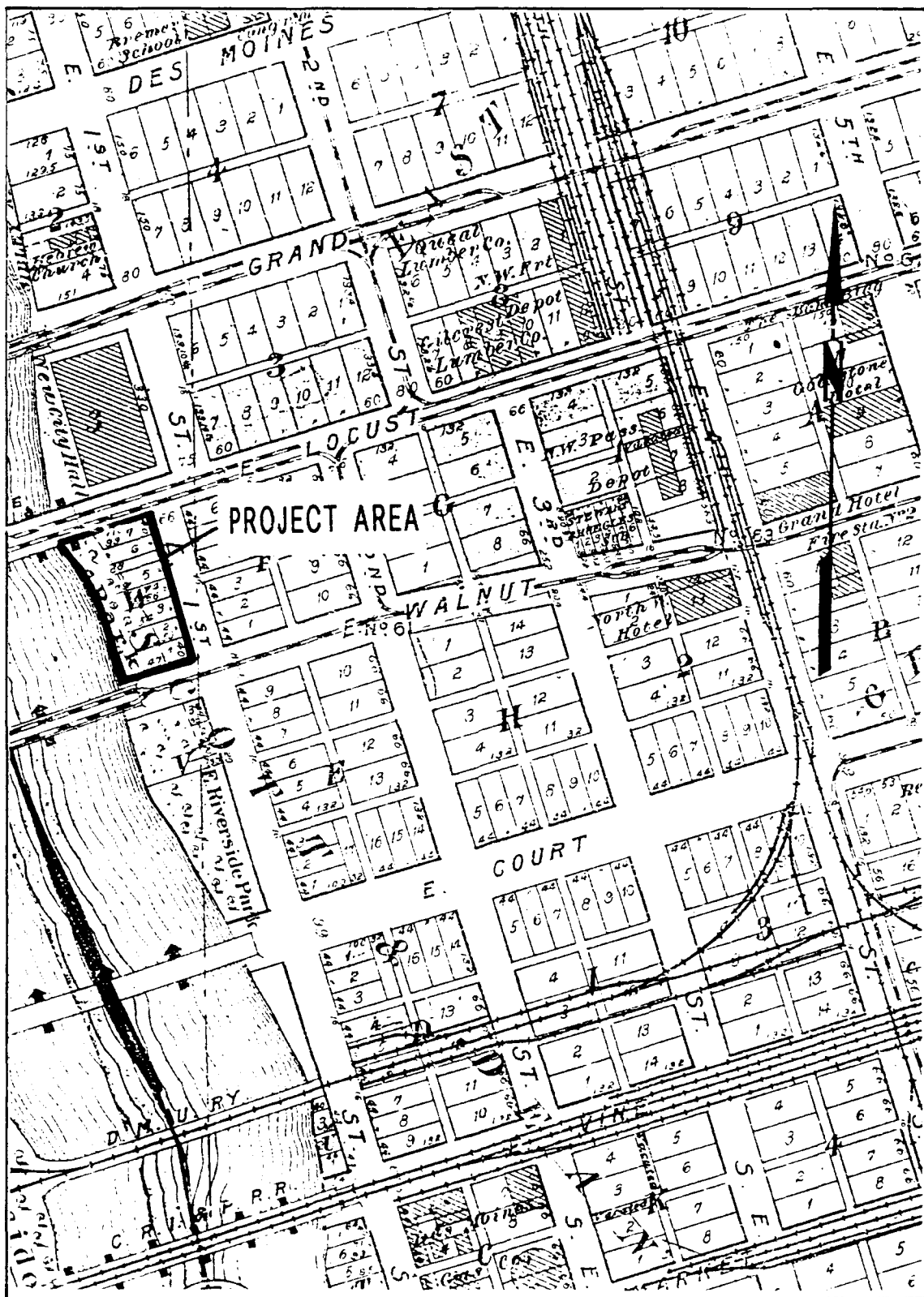


Figure 9. Project area located on 1910 map (Sanborn Fire Insurance Company 1910).

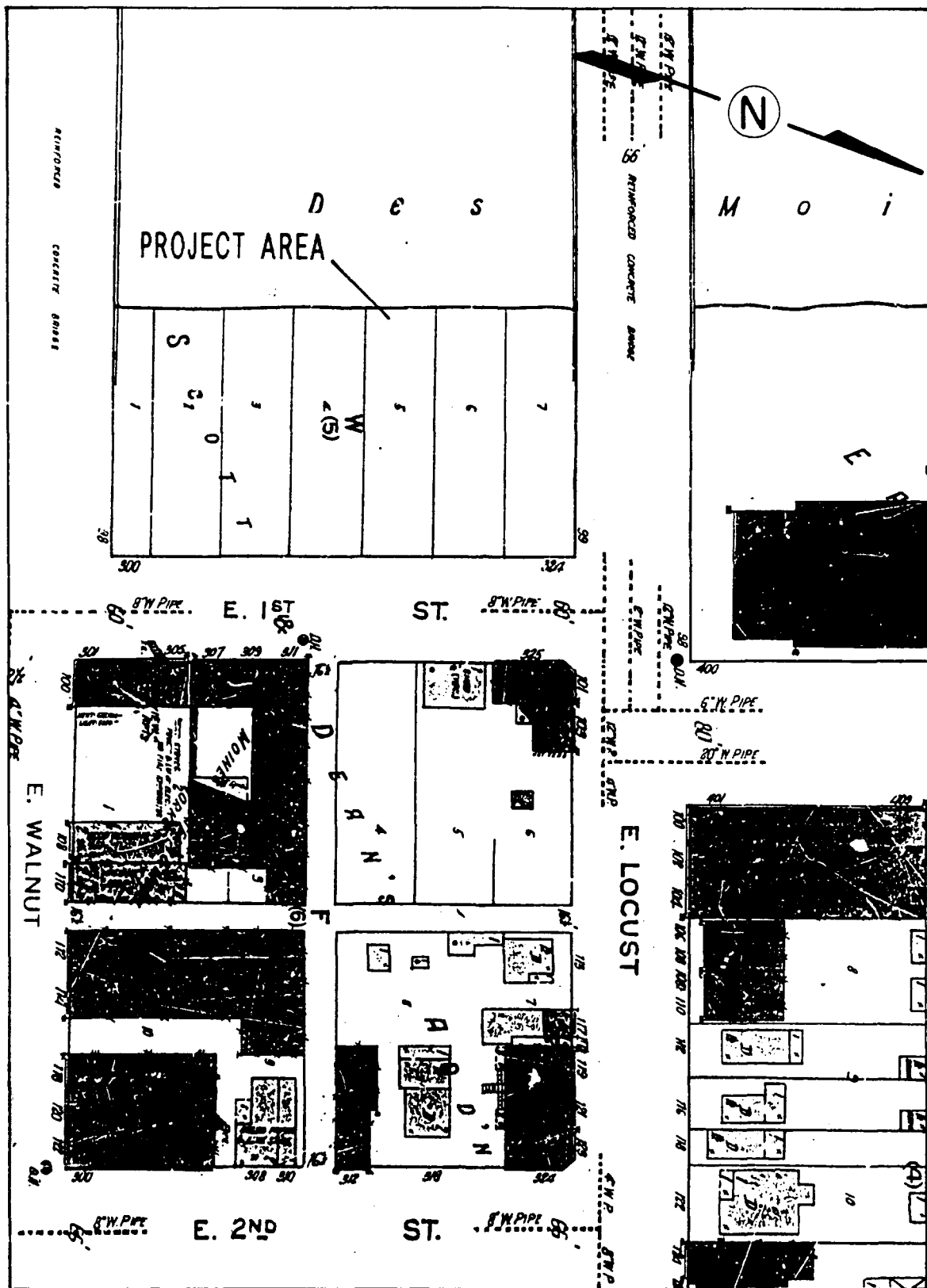


Figure 10. Project area located on 1920 map (Sanborn Fire Insurance Company 1920).

limited degree. Locust Street and Walnut Street bridges were first constructed in 1909 and 1911 and then reconstructed in 1967 and 1966 respectively. Additional impacts to the project area documented on photographs taken in the early part of the 20th century include walkway and riverwall construction (Figures 11 and 12), sidewalk and stairway construction (Figure 13), levee construction, and storm water line construction.

The lower portion of the riverwall was constructed between 1910 and 1925 as the above photographs in Figures 11 and 12 indicate. The upper portion of the riverwall and balustrade were not constructed until the late 1920s or early 1930s. A cross section of the existing riverwall, which is a composite of the lower and upper walls mentioned above, demonstrates the degree of impact this structure has had on the project area through both excavation and redeposited fill (Figure 14).

The concrete wall extends 8 ft. 8 in. from the base of the wall to the base of the balustrade (Figure 14). The balustrade extends an additional 2 ft. 6 in.. The wall extends a minimum of 12 1/2 ft. from the river's edge, indicating the original nineteenth century ground surface was disturbed during construction. In addition, fill must have been placed on the original ground surface behind (east) of the riverwall.

The 1925 photograph also documents a sidewalk parallel to the riverwall and a concrete stairway perpendicular to it, both features well within the project area (Figure 12). The Rock Island District, U.S. Army Corps of Engineers constructed a levee which included an inspection trench six feet deep, seven feet wide at the base, and 19 feet wide at the top. This greatly impacted the eastern edge of the project area

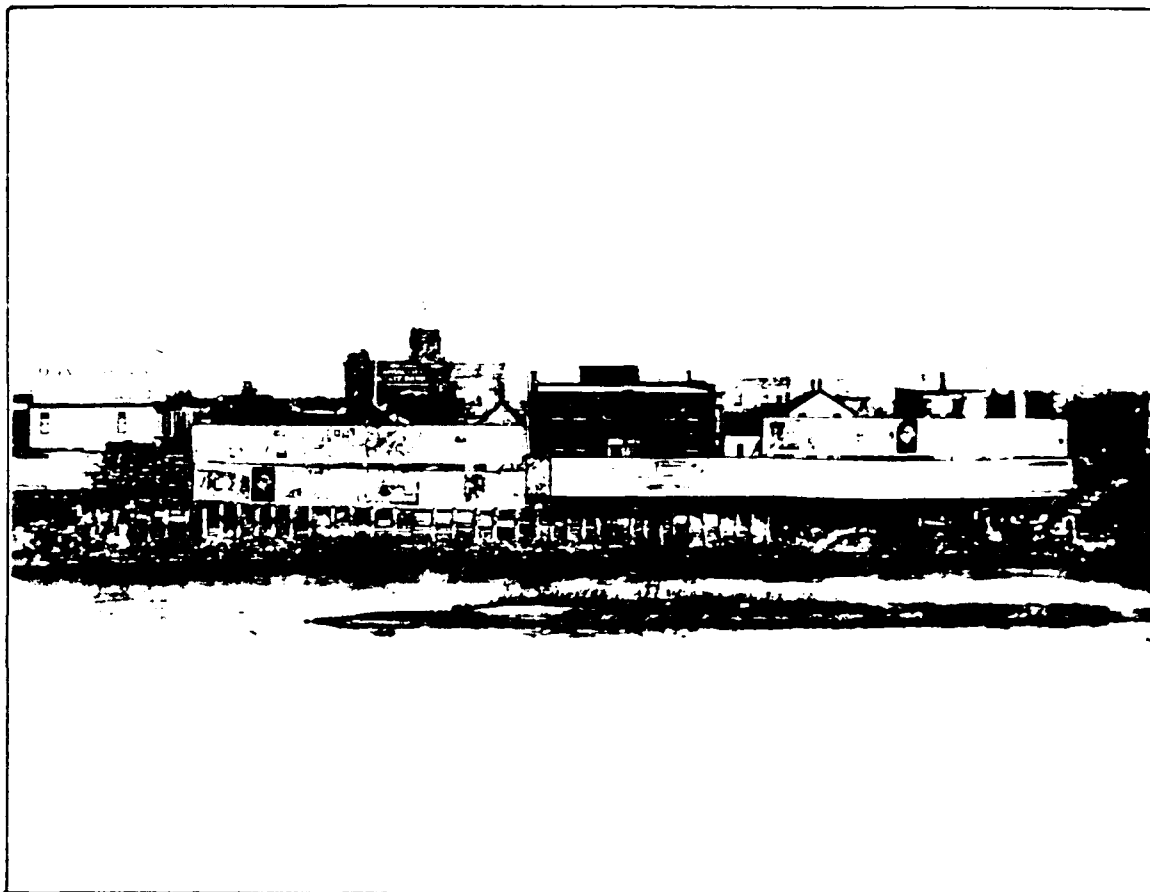


Figure 11. Early photograph of present project area, 1910.

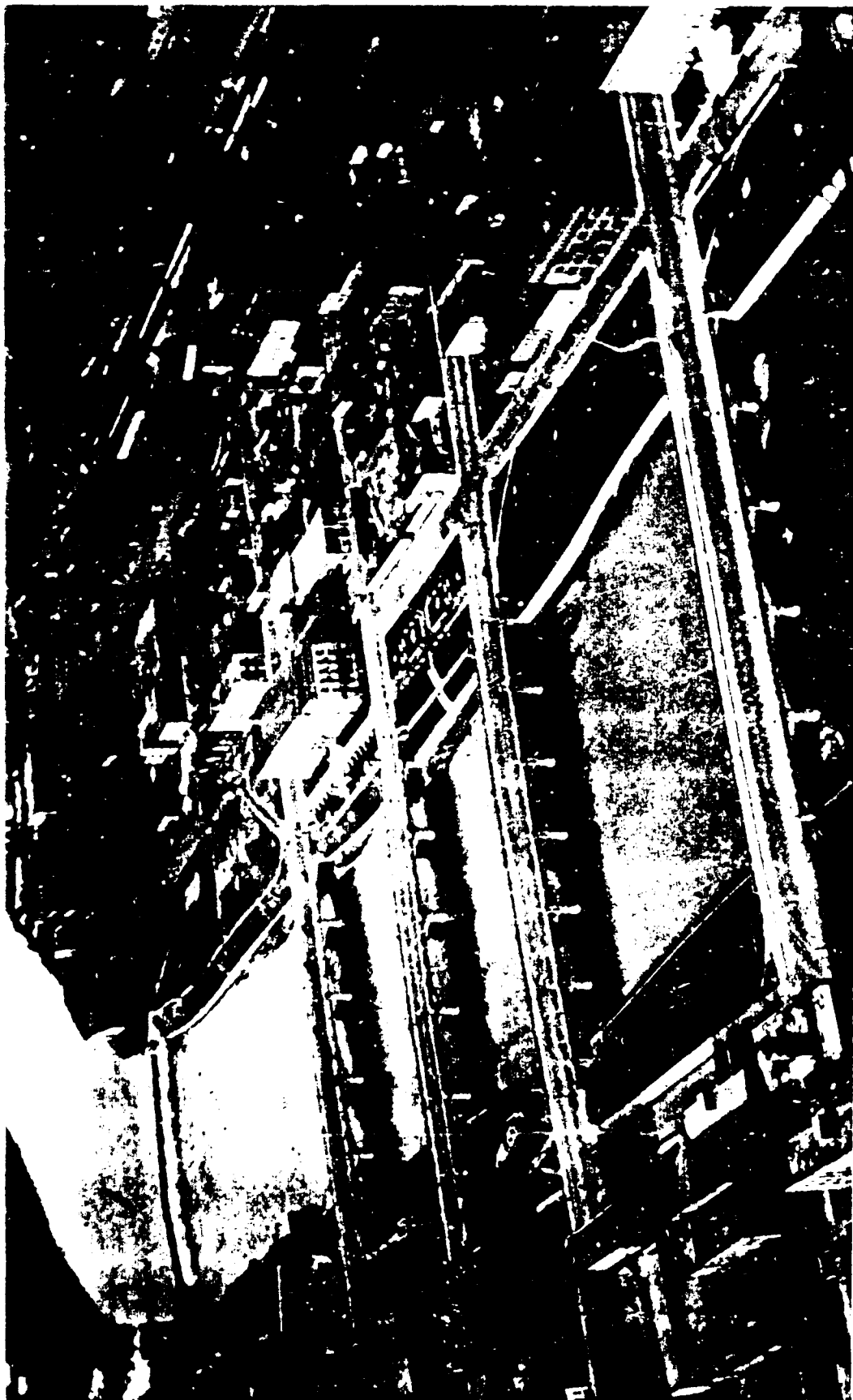




Figure 13. Early photograph which documents sidewalk and stairway construction, circa 1925.

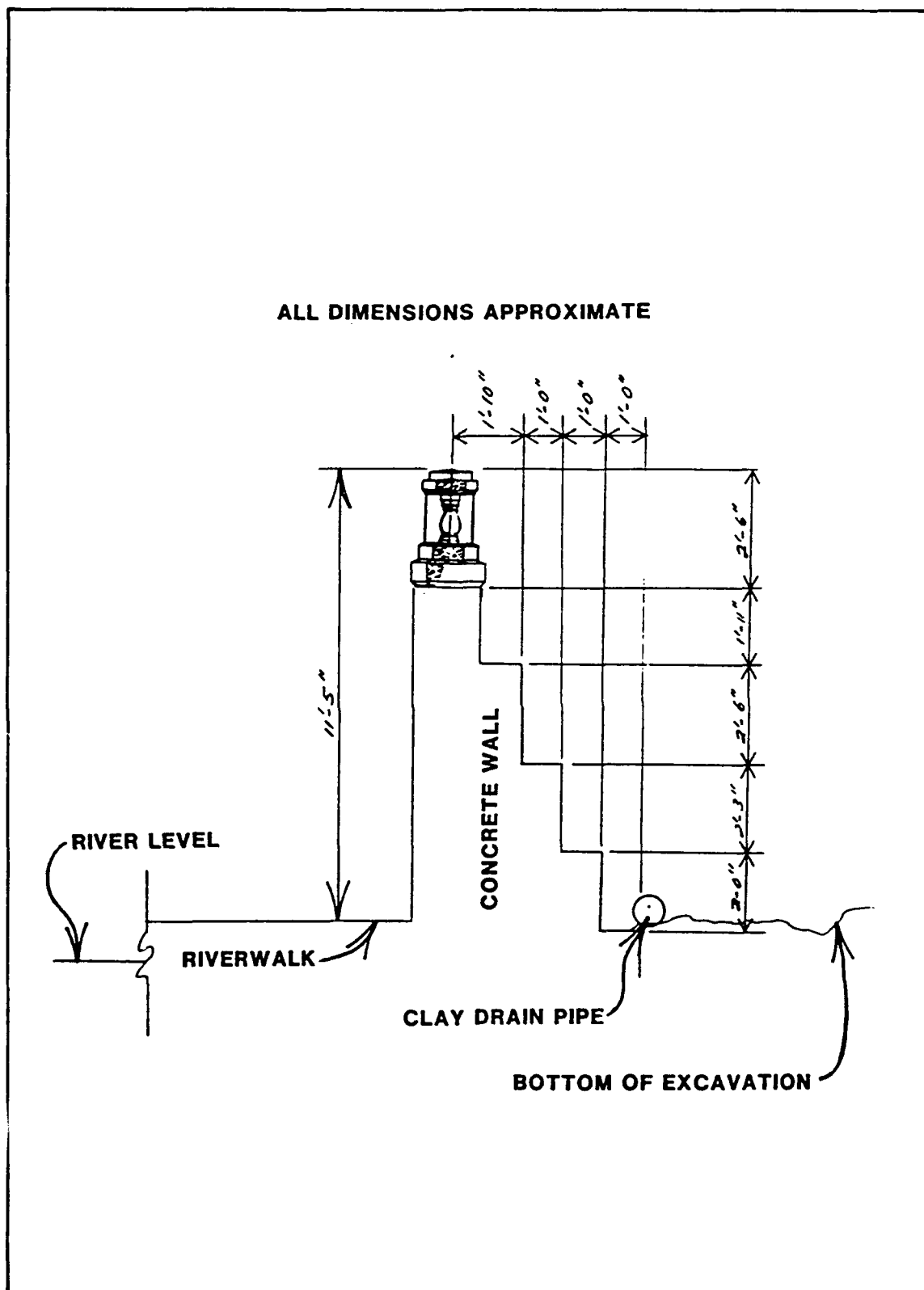


Figure 14. Cross-section of riverwall construction.

within the area of late 19th century commercial and residential development. While the excavation of a storm water line damaged the north end of the project area (Figure 15), no additional impacts have been noted in the last 15 years (Jim Grant 1991).

Recent archaeological investigations have found that during construction of the streets of Des Moines, their elevation was raised considerably (Winham and Ruple 1989:76-77). The depth of the original ground surface ranged from .57 m to 1.18 m below the present surface on the west side of the river (Brice, Petrides & Associates, Inc 1985:5.12; Saunders and Donham 1982:5.16, 5.18).

METHODOLOGY

The methods employed in this Phase II investigation consisted of archival research, hand excavated test units, and deep mechanically-excavated trenches. Archival research on the history of Des Moines and the project area included, but was not limited to, nineteenth century platbooks, atlases, maps, Sanborn Fire Insurance maps, and photographs which detailed structures once located in the project area, as well as documented changes in the landscape of the project area over time. This research preceded the actual fieldwork and thus provided a framework by which to predict the historic properties likely to be encountered.

Test units were hand excavated in order to determine the relative disturbance, nature of soils and deposition, and the potential for historic properties. Trenches were mechanically excavated perpendicular to the Des Moines River in order to determine the maximum depth of fill soils, evaluate the geomorphological setting, and determine the potential for buried cultural remains.

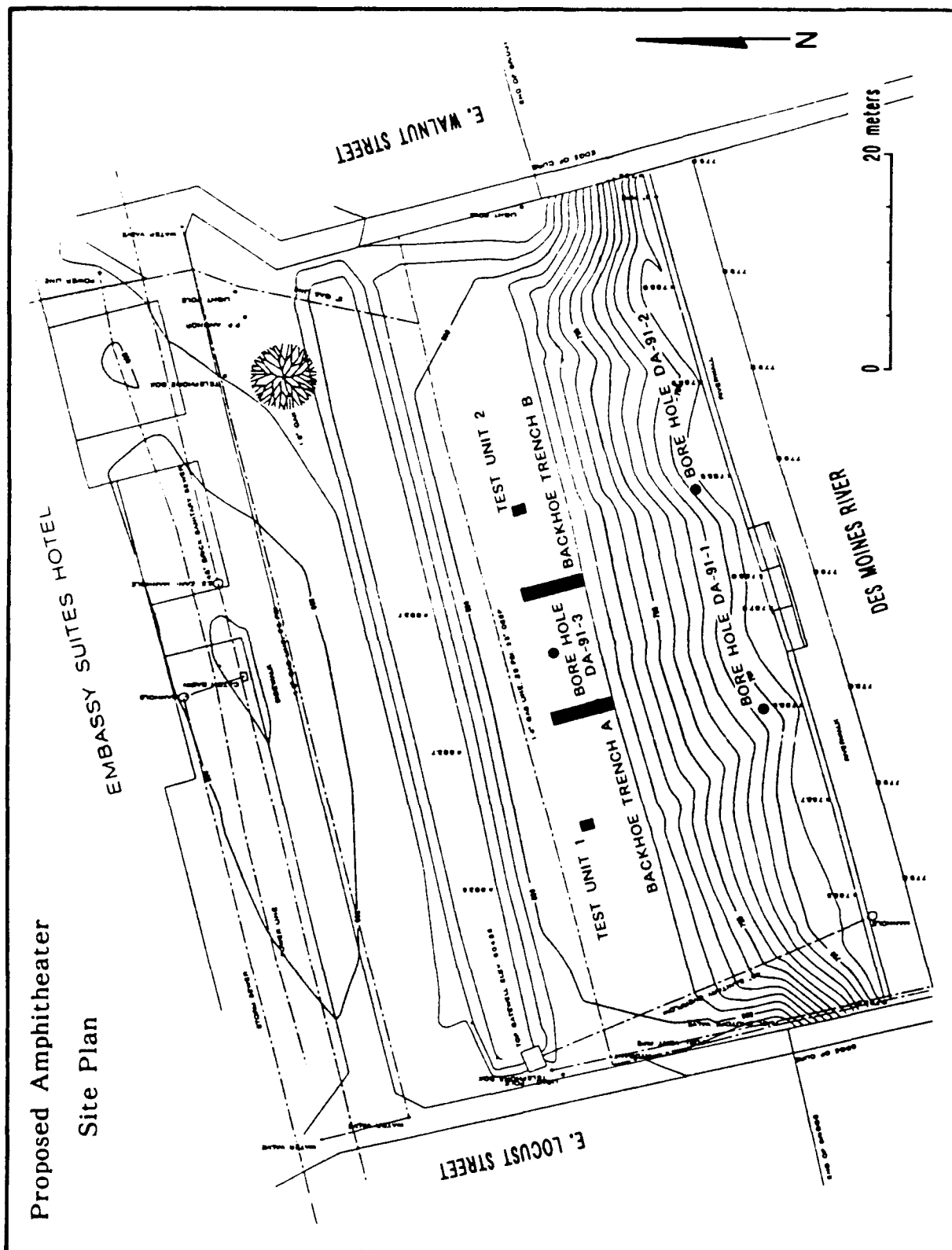


Figure 15. Planview of project area showing past impacts and the location of test units, backhoe trenches, and core samples.

The test units were 1 m by 1.5 m and excavated at 20 cm levels below surface (BS). The fill was screened through 0.5 inch mesh and described in terms of color, texture, content, and integrity. All artifacts, with the exception of gravel, brick, cinders, and mortar, were collected. A sample of diagnostic brick was collected, while the remaining brick, gravel, mortar, and cinders were discarded.

Soil profiles were drawn and photographed from each unit. Planview maps of the test units were drawn when an unusual disturbance and/or cultural feature was discovered.

Two trenches were mechanically excavated to an approximate depth of 2.5 m and an approximate length of 6 m. The trench walls and backdirt were inspected for diagnostic cultural material and evidence of subsurface features. When diagnostic artifacts were collected from the trench wall, their provenience was noted. Soil profiles were drawn and photographed from each trench and described in terms of color, texture, and artifactual content.

Test units were not attempted near the river and river wall due to previous impacts of wall construction and the high water table (3' below surface).

All cultural materials were washed, sorted, catalogued, and temporarily curated at the laboratory facilities of American Resources Group, Limited in Carbondale, Illinois. A site number was not used to catalog the artifacts, however, because of the highly disturbed nature of the redeposited fill from which they were recovered.

RESULTS

Two hand-excavated test units were placed approximately 30 meters apart on a north/south line atop the level portion of land just west of the levee and a known underground gas line (Figure 15 and 16a). The units, excavated to a depth of 60 cm and 70 cm BS respectively, each documented a highly disturbed fill consisting of historic artifacts, cinders, and gravel.

Test unit 1 was excavated to a depth of 60 cm BS and documented a highly disturbed soil profile consisting of black 10YR 2/1 silt loam overlying highly mottled clayey silt and silty clay horizons (Figure 17). At 40 cm BS a black 10YR 2/1 stain was noted in the northwest corner of the test unit. Upon completion of level 3, 40 - 60 cm BS, a sewer drain tile extending north/south with an associated soil disturbance was noted. This was documented both in planview and profile (Figure 17 and 18a).

Test unit 2 was located 30 m south of test unit 1 and excavated to a depth of 70 cm BS. The soil profile includes very dark brown and very dark grayish brown silt loams overlying dark brown sandy silts and yellowish brown silty sands (Figure 18b and 19). The soils are highly disturbed and contain historic cultural materials. The density of artifacts was highest in level 2 (20 to 40 cm BS), although cultural materials were recovered from all levels.

Backhoe Trench A was located 10 meters south of test unit 1 and excavated perpendicular to the river at an approximate length of 6 meters and depth of 2.5 meters (Figure 15). The profile exhibited highly disturbed soils indicative of previous excavation and fill. Cinders,



Figure 14a. Location of test units.



Figure 14b. Excavation of backhoe trench A.

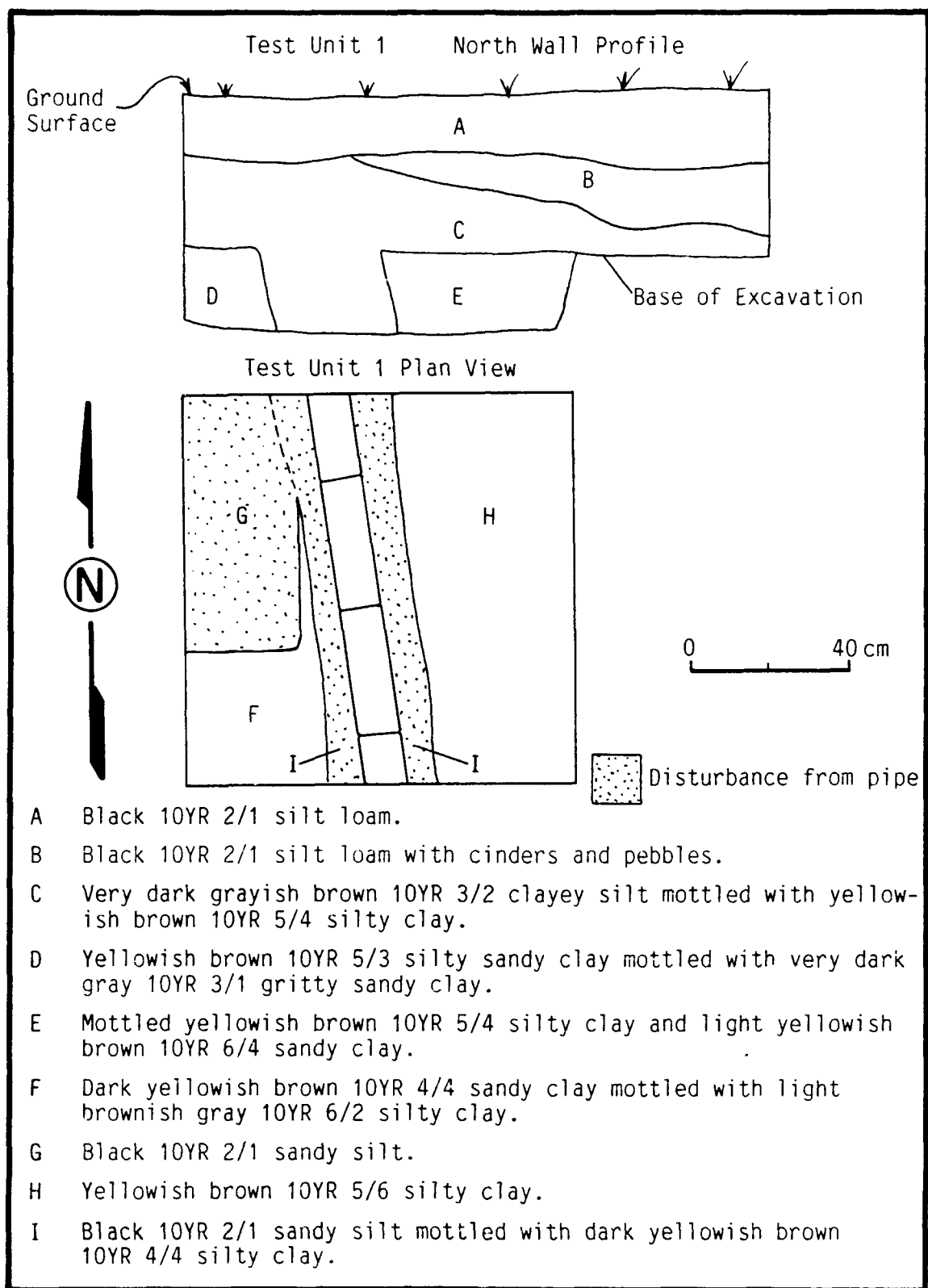


Figure 17. Plan view and profile, test unit 1.

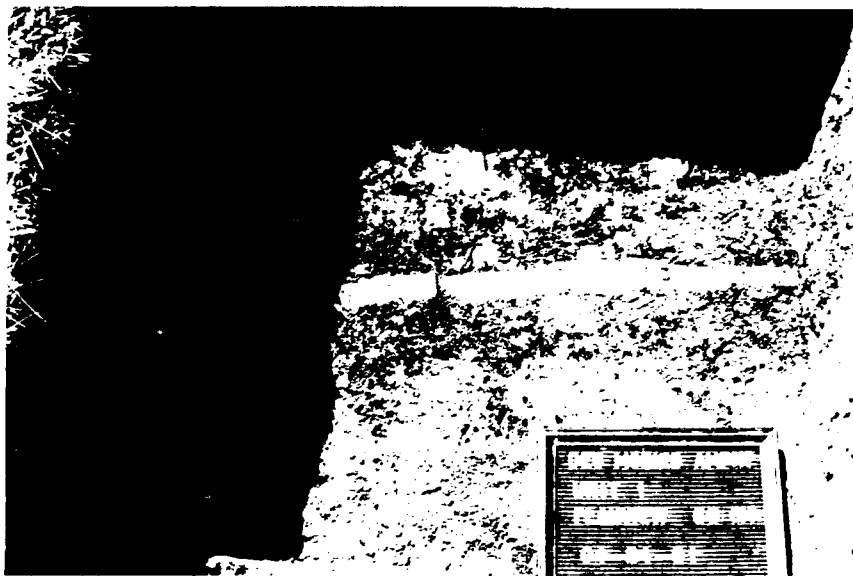
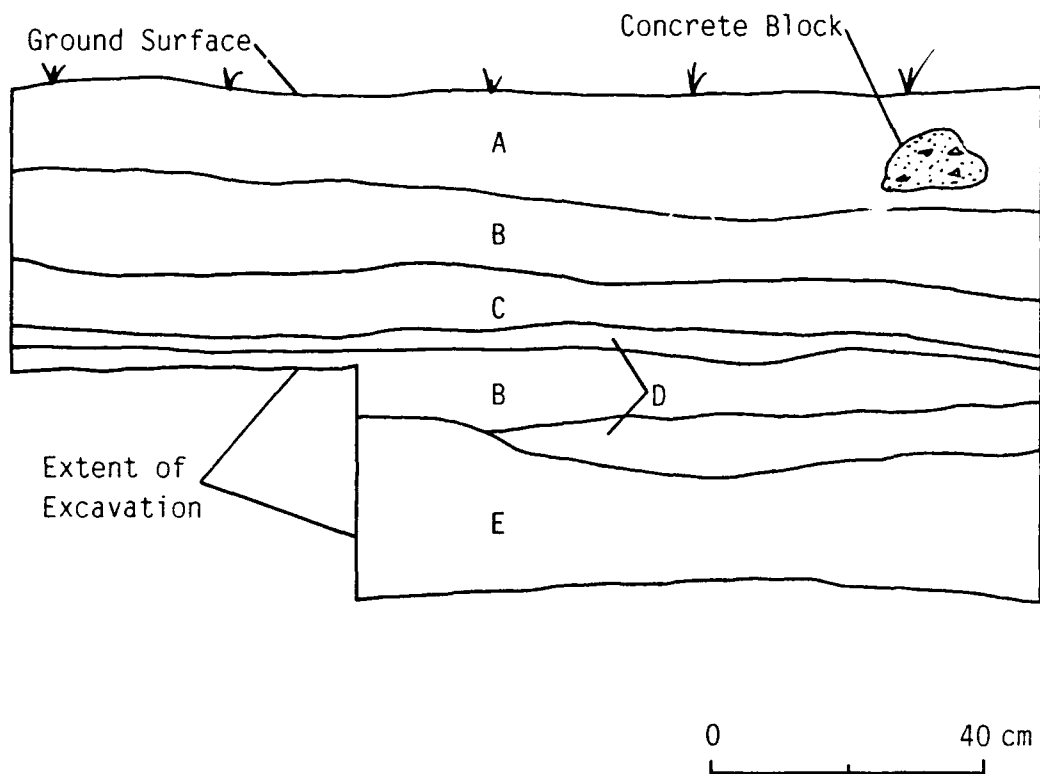


Figure 18a. Plan view of sewer drain tile, test unit 1.



Figure 18b. Profile, test unit 2.

Des Moines Amphitheater
Test Unit 2
North Profile



- A Very dark brown 10YR 2/2 silt loam with yellowish brown 10YR5/4 mottles
- B Dark grayish brown 10YR 3/2 silt loam
- C Very dark brown 10YR 2/2 sandy silt
- D Very dark brown 10YR 2/2 sandy silt with gravel
- E Yellowish brown 10YR 5/6 silty sand

Numerous very small gravels and cinders in all levels.
Soils are highly disturbed.

Figure 19. Profile, test unit 2.

gravel, and brick fragments were noted throughout the fill, while diagnostic fragments of glass bottles were documented at 1.2 and 1.4 meters BS. Diagnostic artifacts, which includes glass, ceramic, metal, and brick, were recovered from the backdirt pile. At the west end of the trench, brick and stone rubble was noted at approximately 1.3 to 2.0 meters BS (Figure 20). Similar rubble was noted in Trench B.

Backhoe trench B was located 10 meters south of backhoe trench A and 10 meters north of test unit 2 (Figure 15). This trench was excavated to an approximate depth of 2.5 meters and was approximately 5 meters long. The profile was similar to that of trench A in terms of soil content, artifact density, and degree of disturbance (Figure 20 and 21). Diagnostic artifacts, which include ceramic, glass, metal, and brick, were recovered from the backdirt pile.

At the west end of both trenches A and B, and resting on river bank sands were similar piles of stone and brick rubble (Figure 20). This location and alignment of these deposits suggest the use of building stone and brick to create a crude rip-rap levee, and it may have been noted on an early city map (Figure 8).

Artifact Analysis

A total of 497 artifacts recovered from the investigations at the amphitheater site were processed and separated into four major classes--ceramic, glass, metal, and other material. Subclasses were then defined within each major class. In addition, each artifact was attributed to a particular functionally related category adapted from previous studies (Mansberger 1988, Rogers et al. 1988, South 1977). The functional categories used in the present study include: (1) kitchen (serving,

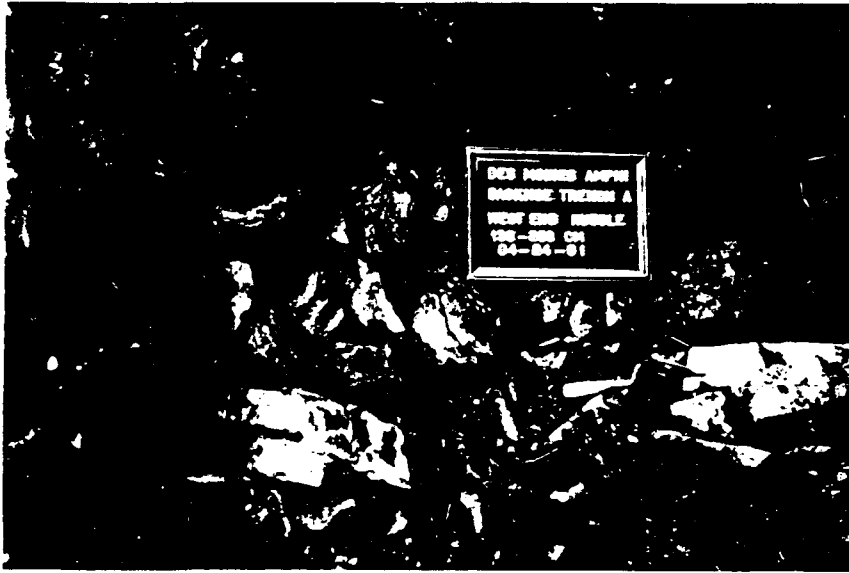


Figure 20a. Trench A, brick and stone rubble, west end.

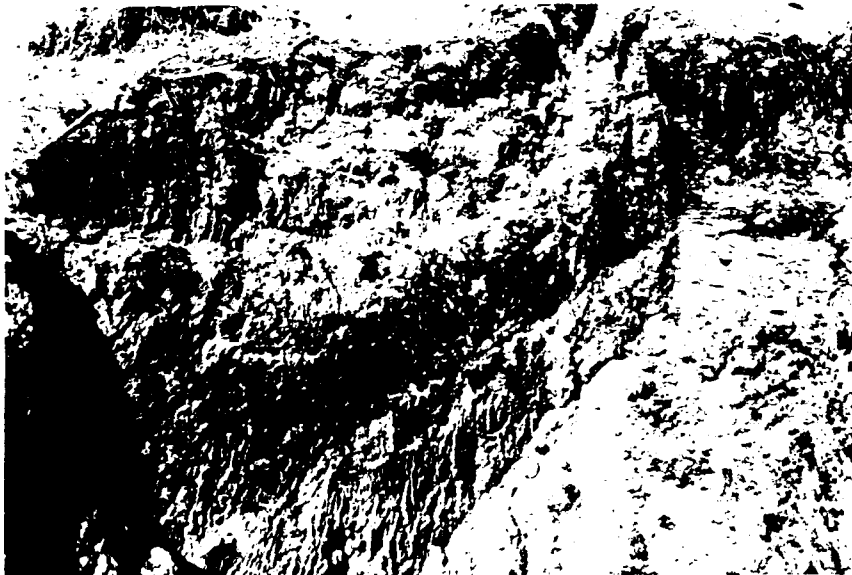


Figure 20b. Profile, trench B.

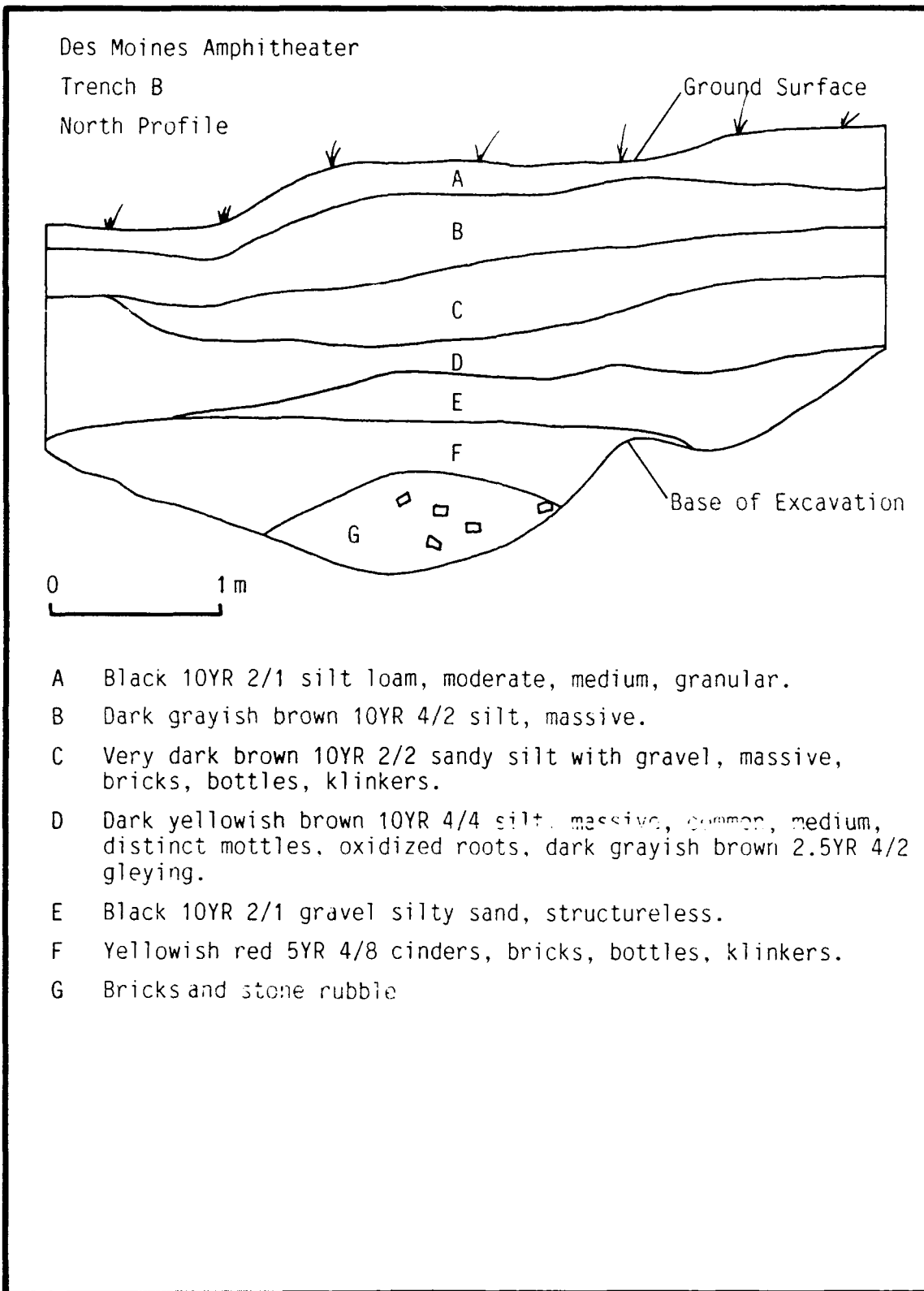


Figure 21. Profile, trench B.

preparation, and storage vessels for food and beverage, non-food related bottles and jars); (2) clothing (buttons); (3) architecture (nails, brick, mortar, plaster); (4) personal (coin); and 5) other (items that cannot be identified as to function at the present time).

Ceramics

The ceramic artifacts were initially identified according to ware type such as whiteware, ironstone, porcelain, yellow ware, redware, and stoneware. These ware types are further differentiated on the basis of paste color, paste texture, glaze, and decoration, attributes generally recognized as temporal indicators for historic ceramics. Ceramic artifacts comprise 12.1% (n=60) of the total artifact assemblage. Functionally related ceramic categories include kitchen (n=59, 98.3%) and clothing (n=1, 1.7%) (Table 1).

Kitchen. Kitchen-related ceramics represent the majority of the ceramic assemblage (98.3%).

Whiteware. Whiteware is an off-white paste refined earthenware fired at a much lower temperature than ironstone and porcelain, and therefore is more porous. Porosity can be determined by applying the tongue to the broken edge of a ceramic. Porous ceramics, such as whiteware, will adhere while non-porous ironstone and porcelain will not adhere. These criteria were used to determine whiteware from ironstone. Whiteware vessels include thin-bodied teaware, thick bodied tableware, and utilitarian forms. Transfer printing, hand painting, decalcomania, and embossing are common decoration styles for whiteware.

The majority of the kitchen-related ceramics was whiteware (n=29, 49.1%) (Table 1). Decorative motifs include blue transfer print (n=1),

Table 1. Historic Artifacts and Functional Categories,
Des Moines Amphitheater Project Area.

Unit	GS	1	2	3	1	2	3	1	2	3	A	1,2*	1,4*	Trench B	Total
Ceramic															
Kitchen															
Whiteware															
Undecorated	2	-	3	-	-	-	-	-	-	-	10	-	-	2	19
Embossed	1	-	-	-	-	-	-	-	-	-	-	-	-	1	2
Blue Transfer Print	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
Brown Transfer Print	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Blue Stencil	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
Slip Glazed	-	-	-	-	-	-	-	-	-	-	5	-	-	-	5
Ironstone															
Undecorated	1	-	-	-	-	-	-	-	-	-	8	-	-	3	13
Porcelain															
Undecorated	-	-	-	-	-	-	-	-	-	-	1	-	-	1	2
Floral Decalcomania	-	-	-	-	-	-	-	-	-	-	2	-	-	-	2
Tinted Glaze	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
Yellow ware															
Embossed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Redware-High Fired	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
Terra-Cotta	-	-	-	-	-	-	-	-	-	-	2	-	-	-	2
Stoneware-Bristol/Slip	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Stoneware-Bristol/Bristol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Stoneware-Slipped	-	1	-	1	-	-	-	-	-	-	3	-	-	-	6
Kitchen Totals	5	1	4	2	1	4	1	4	1	33	0	0	0	8	59
Clothing/Button-Total	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Ceramic Totals	5	1	4	2	1	4	1	4	1	33	0	1	1	8	60
Glass															
Kitchen															
Bottle															
Applied/V-Shape String	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Cup Bottom Mold	-	1	-	3	-	-	-	-	-	-	6	-	-	5	16
Cup Bottom/Hutch Inson	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Applied/Cork Closure	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Improved Tool ed/Cork Closure	-	2	-	1	-	-	-	-	-	-	1	-	-	2	6
Improved Tool ed/Crown Closure	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4
Improved Tool ed/Hutch Inson	-	-	1	-	-	-	-	-	-	-	1	-	-	-	3
Improved Tool ed/Cup Bottom	-	-	-	-	-	-	-	-	-	-	1	-	-	1	2
Melt-Out Off Scar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Narrow Blob Top	-	-	-	-	-	-	-	-	-	-	1	-	-	2	2
Plate Bottom Mold	-	-	-	1	-	-	-	-	-	-	1	-	-	8	12
Sand Tip Pontil	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2
Snap Case	-	-	-	1	-	-	-	-	-	-	-	-	-	1	2
Unid Manufacture	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3

Table 1. (Cont'd).

Unit Level	GS	1-2-3			1-2-3			2-3-4			Trench A			Trench B			Total
		1	2	3	1	2	3	1	2	3	A 1.2*	1.4*	B 1.7*	B 1.7*			
(Glass-Kitchen-Bottles)																	
Blitters-Applied/Cork Closure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Flask/Valve Scar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Phial/Cup Bottom Mold/Imp TI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Phial/Bottom Hinge Mold	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Proprietary/Panel Improved	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tumbler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Container	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Clear	-	4	-	4	5	5	3	3	4	-	-	-	-	3	-	-	28
Grey-ash Tint	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Aqua	2	5	4	61	3	10	7	2	-	-	-	-	22	-	-	-	116
Embossed	-	-	3	6	-	-	-	-	-	-	-	-	11	-	-	-	25
Blue/Art Glass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Opaque White	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Green	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Dark Green	-	-	1	10	-	3	1	-	-	-	-	-	-	-	-	-	17
Amber	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	2
Brown	-	1	1	-	3	-	-	-	-	-	-	-	-	-	-	-	12
Kitchen Total	3	13	9	94	8	28	11	32	2	1	69	2	272	2	272	2	272
Architecture/Flat-Total	-	5	-	1	2	2	1	-	-	-	-	-	-	-	-	-	13
Glass Total	3	18	9	95	10	30	12	33	2	1	70	2	285	2	285	2	285
Metal																	
Kitchen																	
Iron-Possible Stove Part	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
WIn" Can	-	-	-	9	-	-	-	-	-	-	-	-	-	-	-	-	9
Alum-Bottle Screw Cap	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
Kitchen Total	0	1	0	9	1	0	0	0	0	0	0	0	0	0	0	0	11
Architecture																	
Wire-Common Nail	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Wire-Two Headed Nail	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Machine Cut-Common Nail	-	2	-	-	1	23	4	-	-	-	-	-	-	-	-	-	30
Unid-Common Nail	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
Unid-Nail Fragment	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Rebar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Anchor Bolt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Architecture Total	0	7	0	0	1	46	4	3	0	0	0	0	0	0	0	0	61
Personal/1892 Penny	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Other																	
Wire	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2
Spike	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	2
Handle	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
Bar	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
Strap	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2
Sheet/Flat	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Other Total	0	2	0	0	0	7	0	3	0	0	6	0	6	0	6	0	18
Metal Total	0	11	0	9	2	53	4	6	0	0	6	0	6	0	6	0	91

Table 1. (Cont'd).

Unit Level	-----1-----			-----2-----			---Trench A---			Trench B		Total	
	GS	1	2	3	1	2	3	A	1.2*	1.4*	B		1.7*
Other Material	-	2	1	3	1	6	4	4	-	-	-	-	21
Architecture	-	1	1	-	-	-	-	1	-	-	-	-	2
Brick	-	1	1	-	-	-	-	-	-	-	-	-	2
Mortar/Plaster	-	1	1	-	-	-	-	-	-	-	-	-	2
Slate	-	1	1	-	-	-	-	-	-	-	-	-	2
Architecture Total	0	4	2	3	1	6	4	5	0	0	0	0	25
Clothing	-	-	-	-	-	-	-	-	-	-	-	-	1
Leather/Metal Shoe Sole	-	-	-	-	-	-	-	-	-	-	-	-	1
Clothing Total	0	0	0	0	0	0	0	1	0	0	0	0	1
Other	-	-	-	-	-	-	-	-	-	-	-	-	1
Limestone	-	2	-	-	1	2	1	1	-	-	-	-	7
Igneous/Metamorphic	-	-	-	-	-	2	1	-	-	-	-	-	3
Slag/Cinder	-	2	-	-	-	2	6	-	-	-	-	-	10
Wood	-	1	-	-	-	-	-	-	-	-	-	-	1
Wood Handle	-	-	-	-	-	-	-	-	-	-	1	-	1
Charcoal	-	-	-	-	-	-	-	-	-	-	-	-	1
Drainage Tile	1	-	-	-	-	1	-	-	-	-	-	-	2
Mussel Shell	-	-	-	1	1	-	-	-	-	-	-	-	2
Bone	1	1	1	-	1	-	-	1	-	-	1	-	6
Graphite Battery Core	-	-	-	-	-	-	-	-	-	-	-	-	1
Plastic	-	-	-	-	-	-	-	-	-	-	-	-	1
Other Total	2	6	1	1	6	11	2	3	0	0	3	0	35
Other Material Total	2	10	3	4	7	17	6	9	0	0	3	0	61
Assemblage Total	10	40	16	110	20	104	23	81	2	2	87	2	497

SS=General Surface, *meters below surface, Imp TI=Improved Tooled

GS-General Surface, #meters below surface, Imp TI=Improved Tooled

brown transfer print (n=1), stencil (n=1), slip glazed (n=5), and embossed (n=2). The remainder (n=19) were undecorated.

Ironstone. A more durable refined white pasted ware, ironstone has a white hue or a grayish-blue hue determined by the addition of cobalt to the paste or the glaze. Ironstone was separated from whiteware primarily by the higher degree of vitrification. Although most ironstone is undecorated, embossing is sometimes present on vessel borders. Ironstone became popular in the mid-late nineteenth century. Vessel forms are most often thick bodied tableware and utilitarian vessels.

Thirteen undecorated ironstone sherds (22.0%) were recovered from the excavations (Table 1).

Porcelain. Porcelain is a durable, highly vitrified ware, with a translucent, thin body. Porcelain sherds recovered from an archaeological context may represent Chinese export porcelain or porcelain manufactured in England, continental Europe, or the United States. Porcelain manufactured in England, Europe, or the United States was the most common type produced during the late nineteenth century (Haskell 1981).

The five porcelain vessel sherds recovered include floral decalcomania (n=2), tinted glaze (n=1), and undecorated (n=2). They represent 8.5% (n=5) of the ceramics.

Yellow Ware. Yellow ware are durable, buff to yellow paste ceramics with a clear, lead or alkaline based glaze (Ketchum 1987:7). Yellow ware is often decorated with bands of painted color or a mottled, brown sponge-like slip. Yellow ware are primarily utilitarian vessels such as mixing bowls, and chamberpots.

One embossed yellow ware hollow ware sherd, 1.7% of the ceramic assemblage, was recovered.

Redware. Redware is composed of fine grained red pastes. Early redware is low-fired and is probably one of the least durable of ceramics (Watkins 1968:1). Late nineteenth and twentieth century red-paste ceramics for kitchen use are high fired and more durable than early to mid-nineteenth century redware.

The redware recovered include a high-fired, clear glazed vessel (n=1), and an embossed terra cotta bowl (n=2). The redware represents 5.1% of the ceramic assemblage.

Stoneware. Stoneware are characteristically non-porous, fine grained paste, utilitarian vessels. It is fired at a higher temperature than earthenware resulting in a highly vitrified, impermeable ware (Gray 1983:202). Stoneware surface treatments identified in the assemblage include natural clay slip and bristol glaze. Slip glazes, finely ground clays mixed to a creamy consistency, were used in potteries in the United States after 1960 (Landreth 1984). Bristol glazing adapted from English pottery manufacturers, has calcined zinc oxide as the flux agent. The glaze was developed as a replacement for lead glazing, which had been recognized as a health hazard in the nineteenth century (Rhodes 1973:180). Bristol glazes came into common use in United States potteries by the late nineteenth century.

Stoneware sherds totaling eight, 13.6% of the ceramic assemblage, include natural clay slipped (n=6), Bristol glazed exterior and interior (n=1), and Bristol glazed exterior and natural clay slipped interior (n=1).

Temporal Indicators. Decorative elements and glazing techniques on refined earthenwares were recorded to aid in determining the mean ceramic date. The mean ceramic date formula developed by South (1977:217) and suggested temporal ranges from previous studies by Gates and Ormerod (1982), Moir, Green, and Lebo in Journey and Moir (1987), Majewski and O'Brien (1984), Mansberger (1988), Price (1982), and South (1977), have been used in the calculation. The mean ceramic date for an assemblage is calculated by multiplying the median date of a ceramic decoration by the number of sherds of that type. The sum of all the types present within the assemblage are added together with the summation being divided by the total number of sherds to produce the mean ceramic date (South 1977:217-218). Using the above formula, a mean ceramic date of 1895.5 was calculated for the ceramic assemblage.

Clothing. A clothing-related porcelain artifact, an undecorated four-hole button, was recovered (Table 1). Although they have a long history, many countries were making porcelain buttons (between 1850 and 1920) in efforts to meet the demand for them (Luscomb 1967). It is highly probably that this button was also made during those years. Clothing artifacts represent 1.7% (n=1) of the total artifact assemblage.

Glass

Glass artifacts comprise 57.3% (n=285) of the total artifact assemblage. Functionally related categories include kitchen (n=272, 95.4%) and architecture (n=13, 4.6%) (Table 1). Glass artifacts were classified into one of two categories: (1) containers (whole and fragmented bottles, jars, and other hollow wares) and (2) noncontainers (window glass).

Kitchen. The majority of kitchen-related bottles were manufactured ca. 1850-1900 (n=57). Three bottles fall outside this date range. These bottles include sand tipped pontil bottle base (n=1)--early to mid-nineteenth century, and machine-made bottle base--ca. 1910-present (n=2).

Bottles and Jars. Bottle glass, including both intact and fragmented bottles and jars, was analyzed largely according to method of manufacture. When applicable, they were analyzed according to studies by Deiss (1981), and Jones and Sullivan (1985). Bottle manufacturing methods changed rapidly through the nineteenth and early twentieth centuries, and in many cases the new methods and designs were patented. This enables accurate dates to be assigned to many bottles and jars through an analysis of style and method of manufacture. Vessel part, color, embossing, and manufacturer's marks were also noted.

Bottles associated with four bottling companies located in Des Moines during the late nineteenth and early twentieth century were recovered from test units and backhoe trenches. The companies represented are Spencer & Buttler Soda Water Factory (Figure 22a, 23a), Seth Buttler Soda Water Factory, Geo. E. Bryan Excelsior Bottling Works (Figure 23b), and F. Stehm Bottling Works (Figure 22b). Sanborn Fire Insurance maps and city directories were reviewed and indicate the first three factories listed are within the project area. Spencer & Buttler Soda Water Factory, ca. 1882-1891, was located at the northern edge of block W (Figure 5). By 1891 the factory name had been changed to Seth Buttler, Soda Water Factory and Stables (Figure 6). A later change in ownership and company name to Geo. E. Bryan, Excelsior Bottling Works, is indicated on the 1901 map (Figure 7). As illustrated on the 1910 map

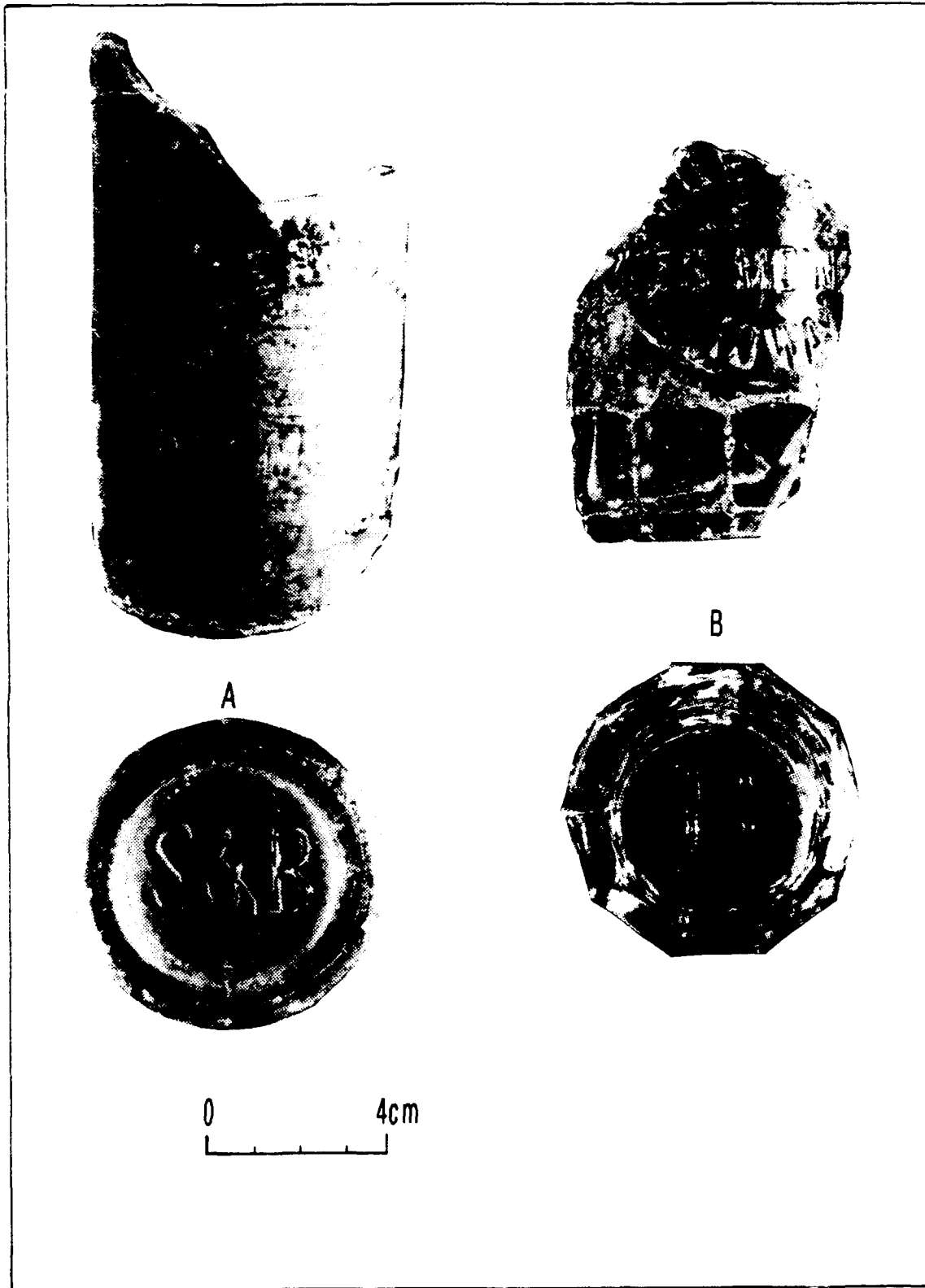


Figure 22. Soda water bottles.

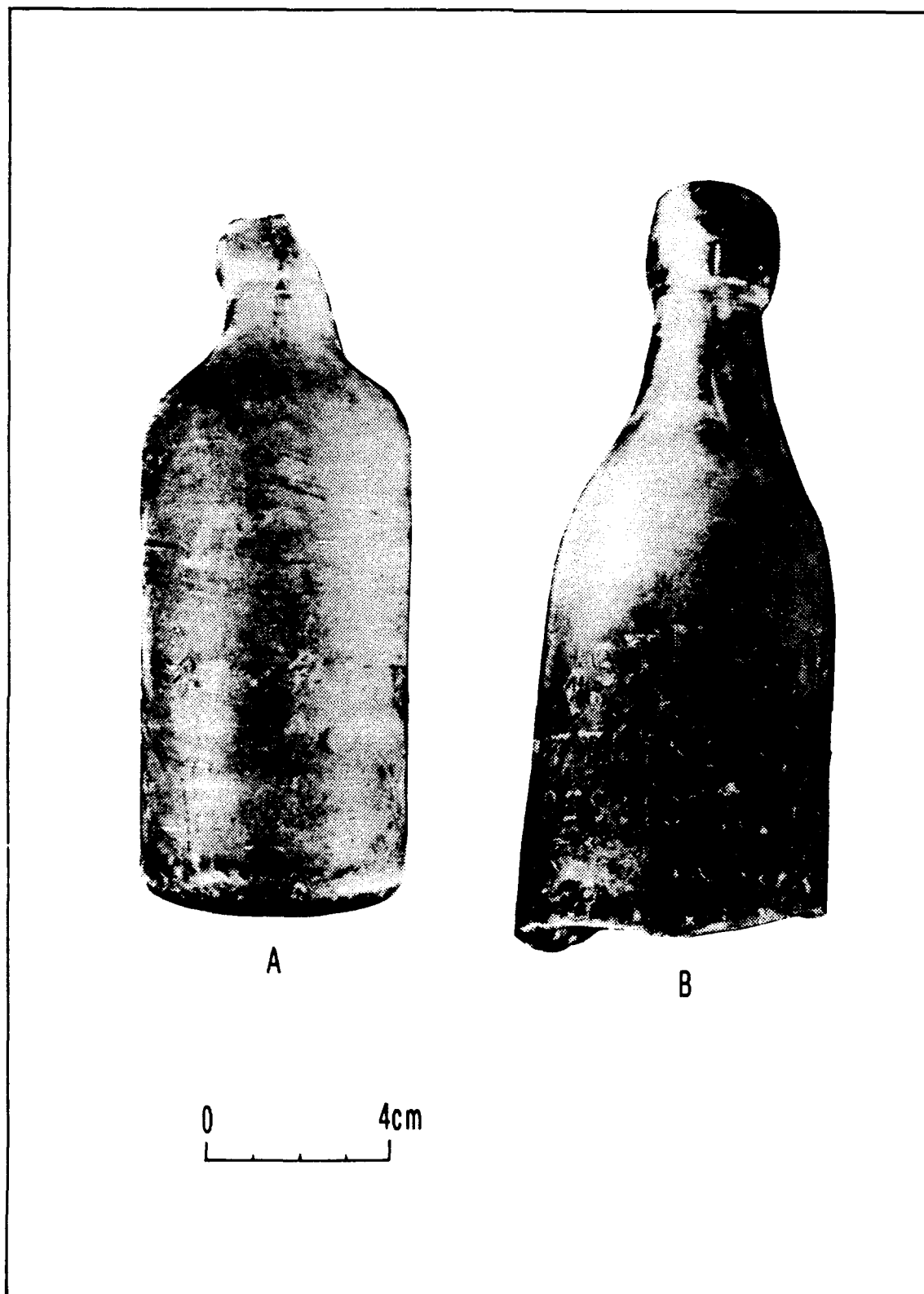


Figure 23. Soda water bottles.

of Des Moines the west half of block W was set aside as East Riverside Park (Figure 9) and by 1920 Block W consisted of seven vacant lots (Figure 10).

Bottle manufacturing techniques for Spencer & Buttler Soda Water Factory bottles (n=13) include hutchinson lip finish and cup bottom mold (ca. 1885-1900) (Figure 23a). The Seth Buttler, Soda Water Factory bottles (n=2) consist of body and base sherds with cup bottom mold manufacture (ca. 1850-1900) and the Geo. E. Bryan, Excelsior Bottling Works bottles (n=11) were manufactured by plate bottom mold with short flutes located at the base (ca. 1890-1915) (Figure 22b).

Other bottles with embossing found were a bitters bottle (PAT^D/DWD/1863/XXX), a soda bottle (. . . OWER & . . .), a bottle base (C C & Co), and a phial (BROMOSELTZER/EMERSON/DRUG CO./BALTIMORE MD., ca. 1889-1900, Fike 1987:111)

Temporal Indicators. A mean glass formula was adapted from South's (1977:27) mean ceramic date formula. The mean date was calculated utilizing known temporal ranges adopted from Deiss (1981); Fike 1987; Jones and Sullivan 1985; Moir, Green, and Lebo in Jurney and Moir (1987). Using the above formula a mean glass date of 1894 was calculated for the glass assemblage at the Amphitheater site.

Architecture. Architecture-related glass (n=13) consists of noncontainer, flat glass or window pane glass. The long known periods of manufacture and/or use of this artifact class preclude the usefulness of this subclass of artifacts in dating the occupation of a site.

The window/flat glass represents 4.6% (n=13) of the glass artifact assemblage. Due to the nature of the artifact deposition it is difficult

to ascertain a direct correlation between the flat glass and the nineteenth century structures located on block W.

Metal

Metal artifacts were classified according to material of manufacture (i.e., iron and copper) and specific function. The method of manufacture was also noted when possible. They represent 18.3% (n=91) of the total artifact assemblage.

Metal from the Novelty Iron Works and Machine Shop, located at the southeast corner of block W (Figure 6), was expected to be recovered. However, none of the metal artifacts found in excavation units appear to be directly related to the machine shop. The majority of metal artifacts are architecture-related (n=61, 67.0%). The other functional categories present are kitchen (n=11, 12.1%), personal (n=1, 1.1%), and other (n=18, 19.8%) (Table 1).

Kitchen and Personal. The kitchen-related metal artifacts; (1) cast iron possible stove part, (2) circular can, and (3) aluminum soda-bottle screw cap, represent 12.1% of the metal assemblage. A single 1892 copper Indian Head penny was also found and classified as a personal artifact.

Architecture. Nails, rebar, and an anchor bolt, comprise the entire architecture-related functional category. The varieties of nails identified include common headed wire (n=3), two headed wire (n=1), and common headed machine cut (n=2). Also present are common nails of unknown manufacture (n=30) and nail fragments (n=23). Forty-six nails were found in unit 2 near the location of nineteenth century structures and downslope from the Novelty Iron Works and Machine Shop. Anchor bolts and rebar, used in reinforcing foundations, are associated with structural foundation remains.

Other. Metal artifacts classified as other (n=18, 19.8%) include bars, handle, sheet/flat metal, spikes, strap, and wire.

Other Material

This artifact class consists of all material in the archaeological record other than ceramic (excluding brick and drainage tile), glass, and metal (n=61, 12.3%). Functionally related artifacts within this category include the remainder of construction materials such as brick, mortar, slate, (architecture, n=25), shoes (clothing, n=1) and faunal material, charcoal, plastic, etc. (other, n=35) (Table 1).

Architecture. Other material classed as architecture-related consisted of brick (n=21), mortar (n=2), and slate (n=2). These artifacts are probably the result of structures on Block W that were razed ca. 1910.

Clothing. A leather shoe sole held together with metal peg ca. 1860-1900, represents functional related clothing that are manufactured from other materials.

Other. The remaining material; unworked stone, cinders, drainage tile, mussel shell, bone, plastic cap, and battery core are classified as other.

Artifact Summary/Interpretations

The historical background of Block W indicates bottling works, stables, a machine shop, and dwellings were present at least as early as 1884 (Figure 5). City directories and Sanborn maps also indicate that all structures on Block W had been razed ca. between 1901-1907 to construct the East Riverside Park. As a result, the assemblage was expected to encompass artifacts associated with these structures, with a

mid-late nineteenth century temporal affiliation. Small numbers of intrusive twentieth century artifacts were also expected in the park area.

The temporally diagnostic artifact assemblage indicates that the deposition of artifacts occurred during the late nineteenth and early twentieth centuries. The majority of artifacts recovered from the archaeological investigations reflect a mean date of 1895.

Temporally diagnostic bottles were recovered from Trench A (n=2) and Trench B (n=1) at a maximum depth of 1.4 mbs and 1.7 mbs, respectively (Table 1). The two bottles associated with Trench A are a biters bottle (ca. 1860-1870) and a phial (ca. 1889-1900). The bottle found at 1.7 mbs in Trench B was manufactured ca. 1860-1915. The historic context of these temporally diagnostic containers located near the base of the bakchoe trenches is contiguous with the temporally diagnostic artifacts recovered in the hand excavated units. An 1892 Indian Head penny, found in the top 20 cm of test unit 1, correlates the mean dates derived from the temporally diagnostic ceramics (1895.5), temporally diagnostic glass (1894), and the date range for the three bottles recovered near the base of the trenches.

Very few twentieth century artifacts were recovered. Both the artifact assemblage and the documentary record reflect the late nineteenth and early twentieth century residential dwellings and bottling works that were present on site.

GEOMORPHOLOGICAL INVESTIGATION

The evaluation of site deposits and associated evolution at the amphitheater site is based upon geomorphic survey and deep testing. The

geomorphic survey, conducted on April 24th, evaluated deposits from two backhoe trenches, while the deep coring, conducted by the R.I.C.O.E. January 28th to 30th, are presented (Hotchkiss 1991) (Figure 15).

The geomorphic investigation shows that most of the deposits found in the trench profiles reflect episodes of historical filling and regrading. Below the fill lies a late Holocene terrace which shows a poorly developed coarse grained soil beginning at about 170cm. Similar historical fills and regrading episodes have been recently studied during a Phase III mitigation along the Hannibal levee alignment in Mississippi River Pool 22 (Hamilton et al., 1991 draft report).

The city of Des Moines is located along the late Wisconsinan aged Des Moines lobe complex (Bettis 1985, Rogers et al. 1987). Native soils in the area are developed in late glacial deposits, and coarse grained alluvium. Native soils at the site were likely developed under prairie vegetation and were Mollisols, Inceptisols or Entisols. The native soil buried below the overlying historical fill has experienced erosion but was probably a Mollisol.

Methodology

The specific field parameters used when examining the soil profiles of the backhoe trenches included: color, texture, structure, consistency, sorting, special features (roots, pores, voids, coatings), effervescence and/or pH, and horizon boundary. Soil colors were determined with the Munsell color chart, whereas soil reaction and effervescence was determined through the application of a 14% hydrochloric solution.

Results of Investigations

Historical Units.

Both backhoe trenches show a late Holocene terrace buried by historical filling episodes. Both trenches also show about the same depositional sequences. Specifically, a profile described along Amphitheater Trench A shows the top 50cm composed of a massive very dark brown silt loam fill. Below, to 63cm lies a unit of brown massive silt loam. From 63cm to 94cm a strong brown (reddish brown) massive silt loam is observed. Underlying and continuing to 129cm lies a massive light yellowish brown (tan) silt loam. A massive dark brown silt loam continues to 155cm. The last historical fill unit lies from 155cm to 170cm and is composed of cobbles (rubble), cinders, and bricks graded into laminated units.

All of the historical fill units show abrupt smooth or irregular boundaries. With the exception of the rubble, cinders and brick unit, all of the overlying fill units dip downslope toward the Des Moines River and indicate progressive regrading episodes. The historical units are unleached and effervesce with application of the 14% hydrochloric acid solution.

Native Deposits.

Below the rubble and cinders lies the native floodplain soil. The soil is observed from 170cm to the base of the trench at 215cm. Generally, a weak A-C profile is observed with an eroded A horizon beginning at about 170cm and continuing to 198cm. The A is dark grayish brown, it is leached with pH 7.5, and composed of structureless medium sand. The boundary with the underlying C horizon is clear and wavy, and along the boundary, krotovina is observed. The C horizon is

structureless light yellowish brown medium sand which becomes very pale brown and unleached by 215cm.

Core Sampling.

Deep testing of the native soil and underlying bedrock was conducted at three locations in the project area (Figure 15). The results indicate that the historical fill overlies recent alluvial deposits of sands, silts, and clays beginning about 170 cm BS. These in turn overlie glacial deposits of sands and gravels at approximately 7 meters BS (Hotchkiss 1991). Bedrock, consisting of Pennsylvanian age argillaceous siltstones and silty shales, was encountered approximately 12 meters BS (Hotchkiss 1991).

Conclusion

Observation of the buried terrace and native soil indicates some surface erosion prior to burial by historical fill. The terrace is probably of late Holocene age based upon relative soil development. A few charcoal flecks were reported in the buried native soil, however quantities were small.

Periods of construction regrading are indicated by considerable historical fill units. These units are silty but at the base of the fill, rubble, cinders, and bricks are observed. Historical construction fill events resemble those observed at the Hannibal Phase III levee alignment, and show that in many urban areas, historical development dominates floodplain evolution.

RECOMMENDATIONS

Judgements regarding site significance are a major objective of all cultural resources surveys and assessment. It is incumbent upon the investigator to evaluate each resource with regard to the National Register of Historic Places criteria of significance. The criteria are:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and

a) that are associated with events that have made a significant contribution to the broad patterns of our history; or

b) that are associated with the lives of persons significant in our past; or

c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic value, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

d) that have yielded, or may be likely to yield, information important in prehistory or history.

Criteria considerations: ordinarily cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, commemorative in nature, and properties that have achieved their significance within the past 50 years shall not be considered eligible for the National Register of Historic Places (Federal Register 1976:1595).

These investigations have failed to identify historic properties which meet any of the NRHP criteria of significance. Impacts to the project area dating back to the early 20th century have completely obliterated the integrity of subsurface archaeological deposits. The recovery of late 19th century bottles in such highly disturbed

redeposited fill only reiterates the presence of a bottling factory during the late 1800's in the project area, information which was already available from Sanborn Insurance Maps of that time period. No new information concerning nineteenth century bottling works in Des Moines would be recovered from further investigation of the amphitheater site. It is therefore recommended that construction activities proceed without further evaluation of historic properties.

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APPENDIX A:

Scope of Work

SCOPE OF WORK FOR A PHASE I ARCHEOLOGICAL RECONNAISSANCE
FOR HISTORIC PROPERTIES FOR THE
PROPOSED DES MOINES RECREATIONAL RIVER AND GREENBELT,
DOWNTOWN RIVERFRONT PLAZA/AMPHITHEATER, DES MOINES, IA.

I. OBJECTIVE

1.1 The purpose of this Scope of Work (SOW) is to conduct a Phase I archeological reconnaissance to search for buried historic properties affected by the proposed Downtown Riverfront Plaza/Amphitheater (hereafter referred to as the Project), Polk County, Des Moines, Iowa. Specifically, the Project is approximately 1 acre of city-owned land within Section 4, Township 78 North, Range 24 West, (1956 Des Moines 7.5' U.S.G.S. Quadrangle), bounded by Locust, Walnut, and East First Streets, and the Des Moines River (Fig. 1).

1.2 The SOW is appropriate as a work order for American Resources Group, Ltd., Carbondale, Illinois, subcontractors to Stanley Consultants, Inc., Muscatine, Iowa under indefinite delivery contract number DACW25-89-D-0018 (hereafter, referred to as the Contractor).

1.3 The main objective of this SOW is to locate and identify, through excavation and documentation, historic properties present within the Project. The project includes portion of the National Register of Historic Places (Fig. 2, NRHP Nomination Form) Civic Center Historic District (Historic District) within the City of Des Moines (City). This objective will be carried out through hand and mechanical excavation and documentation.

1.4 The major constituents of the work order are: 1) Phase I archeological reconnaissance sufficient to determine the location of subsurface historic properties potentially NRHP within the Project area, 2) documentary background research sufficient to identify the potential for buried historic properties, aid in the excavation, and determine project impacts, 3) preparation of a high quality technical report on the archaeological and archeomorphological results of the investigations which meets the Rock Island District, U.S. Army Corps of Engineers (Corps) SOW and the Iowa State Historic Preservation Office (SHPO) draft guidelines for Phase I archaeological reconnaissance surveys/reports, including completion of archaeological site survey forms.

1.5 If historic properties can be determined to be NRHP eligible during Phase I this should be documented within the report. If significant historic properties will be affected by the Project, further management suggestions for Phase II archeological testing procedures for NRHP eligibility determinations shall be documented within the report. Historic properties which are not significant, shall be included and described within the report documenting this determination.

II. REGULATORY AUTHORITY AND REQUIREMENTS

2.1 This action is being taken in accordance with the National Historic Preservation Act of 1966 (as amended), the Archeological and Historic Preservation Act of 1974, Executive Order 11593, Title 36 of the Code of Federal Regulations, Parts 60-66 and 800 (as appropriate), and Public Law 99-98.

2.2 The Contractor must adhere to minimum qualifications for fieldwork, reporting, and curation standards as described in the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (1984).

III. BACKGROUND

3.1 The Corps and City proposes that the Project will include a low profile landscaped plaza and amphitheater, metal arc mast lighting and sound attachment, and a stage which penetrates the Des Moines river wall and extends into the river channel and Historic District. Previously documented surface and subsurface features are enclosed in plan view, to aid in the identification and avoidance of the electrical lines, levee damage, and other recent disturbances and municipalities (Fig. 3).

3.2 In accordance with Public Law 99-98, the Project was included as part of the Des Moines Recreational River and Greenbelt. The primary concept of the Des Moines Recreational River and Greenbelt is to coordinate existing Federal, State, and local recreational and environmental enhancement projects by linking them collectively to maximize the attraction of recreational and economic development. The Historic District is a significant example of late 19th and early 20th century riverine community planning and development following progressive national trends, although riverine use has been historically low due to limited access and minimal attraction.

3.3 The Corps and City presented the proposed Project with the State Historic Preservation Officer (SHPO), by copy to the Advisory Council on Historic Preservation (ACHP) Fig. 4), for comment. On December 11, 1990, the SHPO concurred that a Phase I archeological reconnaissance and would be in compliance with Section II. REGULATORY AUTHORITY AND REQUIREMENTS and stated that the Project may affect the City Historic District River Wall (Fig. 5). According to the Historic District nomination form (pp 22-23), the River Wall is concrete and consists of an ornamental balustrade, interceptor sewer, fill soil, and incomplete sections of earlier attempts to confine the river. Early 20th century Des Moines River improvement charts and preliminary excavations by the Corps on December 18, 1990, indicate the present wall is attached to an older concrete river wall (Figs. 6 and 7).

IV. SPECIFICATIONS

4.1 A literature search will be conducted to provide an archeological and archival background pertaining to the immediate area. Due to the urban nature of the site, the literature search will include, but not necessarily be confined to, archaeological site reports, plat books, atlases, maps, county histories, and other relative documentation. Examination of existing maps and geomorphological data should precede the detailed field investigations. The examination of existing maps and background documentation should precede the excavations.

2 The Contractor will hand excavate two tests units to determine the relative disturbance and location of historic properties, then mechanically excavate two trenches perpendicular to the Des Moines River, but not through and within 6' of the existing levee, to search for historic properties and determine the maximum depth of fill soil(s). This trenches may extend over 10 feet from the present ground surface and the excavations and investigation must strictly adhere to the appropriate Occupation, Safety, and Health rules and regulations. Within the Project area, the River Wall, and any successive river walls, construction trenches, and any related features will be thoroughly explored and documented within the mechanical trenches. The excavations must justify and documented artifact retrieval and collection methods and analysis.

4.3 The Contractor shall discuss the general implications of the documentary and archeological investigations within the framework of site interpretation and management. Any geomorphological investigations and, artifact and contextual interpretations, shall be conducted in support of the

excavations and documented and discussed within the Phase I report.

4.4 The Contractor shall provide a sufficient level of investigation (documentary, archeological, and archeomorphological) for the Rock Island District Archeologist and the Iowa SHPO to assess the potential for the Project to contain significant historic properties. Complete legal descriptions will be provided, along with any photographs or illustrations necessary to support the Contractor's conclusions and site evaluations (focusing on fill, area, and artifacts). New sites shall be reported to the Illinois SHPO and Office of State Archaeology (OSA) on appropriate forms. The Rock Island District shall receive copies of these forms with the final report, but not included within the report, as this information is not for public purview. All sites shall be plotted on U.S.G.S. topographical maps and submitted with the final report.

4.5 The Contractor shall make recommendations for any Phase II testing that may be necessary to determine the NRHP eligibility of each historic property encountered as well as indicate the condition of the resource and potential effects. The Contractor shall also indicate and describe those historic properties, artifacts, or features, which require no additional investigations, or, are not considered significant. A formal determination of eligibility is not a requirement of this work order. However, any resource which can be clearly evaluated as eligible or not eligible for listing on the NRHP should be evaluated and included in the report recommendations to avoid any unnecessary visitation to the proposed project area.

V. REPORT

5.1 The Contractor shall prepare a draft and final technical reports on the investigation and results according to the specifications described in Section IV. Depending upon length and appropriateness, the Contractor's report or portions therein, may be included or cited within the District's documents. This action shall in no way preclude the Contractor from independent publication or use of data upon completion of the project. Any project related publications, articles, or use of the report data will reference the Corps.

5.2 A brief letter report detailing the preliminary field results with initial management options for a Phase I no effect or continued Phase II archaeological testing/mitigation shall be provided to the Corps seven (7) days after completion of the field work.

5.3 The Contractor shall provide a high quality descriptive and interpretive report to contain, but not necessarily be limited to the following: abstract, table of contents, list of figures, introduction, project description, excavation (strategy, methodology, and justification), environmental background (geomorphology, physiography, and ecology), archeological and archival background with cultural/temporal outline and previous projects search, artifact analysis, further management recommendations, bibliography, site photo log, correspondence, artifact inventory, and illustrations as required.

5.4 Three copies of a final draft report shall be submitted to the Contracting Officer for review. The draft report will be complete and finalized when submitted. The Corps anticipates a 30-day review period, for the Corps, City, SHPO, ACHP, and necessary parties, to review the final draft report and to supply comments for consideration in the final report. However, this anticipated review period is only provided for general scheduling and the Corps reserves the right to any extension of the review period.

5.5 Upon approval of the draft report and receipt of notice from the Contracting Officer, the Contractor shall prepare (adhering to the comments) and submit 15 copies and 1 reproduction ready master of the final report. A copy of any software which was used to write and edit the report shall also be submitted.

VI. CURATION

6.1 It is the responsibility of the contractor that artifacts or cultural materials collected, notes, photographs, one final report, or other data generated during the performance of contract services shall be curated at one accredited curatorial facility for preservation or alternative curatorial placement facility agreed upon by the Corps and SHPO. These materials are the property of the U.S. Army and can be made available for interpretive programs, additional research, or any other purpose upon written request and approval from the Corps. It remains the Contractor's responsibility to safeguard all of this material and to provide a archival catalogue system and/or artifact accession inventory to facilitate access and to confirm that all storage units be marked "Property of the U.S. Government, Rock Island District U.S. Army Corps of Engineers".

6.2 The Contractor's cost estimate shall reflect permanent artifact and material storage/curation. Storage and curation must be in an Iowa facility to be approved by the Contracting Officer with the final report submittal.

VIII. COST PROPOSALS

7.1 The Contractor shall submit a Detailed Cost Proposal which addressed the SOW to the Corps within 10 days.

VII. PROJECT SCHEDULE

8.1 The following Project Schedule shall apply, unless the Contractor submits an accelerated schedule for consideration as part of the proposal:

<u>PROJECT SCHEDULE</u>	
Tasks	Calendar Days
Award	0
Documentary Background Research	12-14
Fieldwork	15-20
Letter Report	27
Analysis and Report Preparation	21-39
Flex Time	40-75
Draft Report Due	76
Review Period	77-107
Final Report Due	130

This is the maximum acceptable time frame for project execution and completion. There is a possibility for limited modification within the schedule for specific tasks upon approval of the Contracting Officer. Thirty-five (35) days of flex time is figured in the general schedule and may be made available to the contractor upon request based on unanticipated delays to the project execution resulting from weather and flooding.

8.2 The payment schedule will be based upon completion of major tasks:

<u>PAYMENT SCHEDULE</u>	
Tasks	Percent of Total Payment
1) letter report	50
2) draft submittal	75
3) final report submittal	100

8.3 It is anticipated that the fieldwork will require two archeologists 5 days and one Geomorphologist 1 day.

IX. COORDINATION

9.1 The Contractor shall provide a Monthly Progress Report throughout the contract period. The Contractor shall notify Corps Archaeologist Ron Deiss at 309/788-6361, Ext. 6185, directly before the fieldwork begins and after the field has been completed. The Corps staff may require a field orientation trip once sufficient progress has been made; hence, the Contractor shall also notify the Corps Archeologist when fieldwork has reached a stage that a visit would be most beneficial. The Contractor shall also coordinate all proposed archeological test units and mechanical trenching with Ms. Patricia Zingsheim, Principle Planner, Des Moines Planning Department, East First and Des Moines Streets, Des Moines, IA. 50304, at (515 283-4182). This coordination is required so as to avoid damage to extant utilities and municipalities.

X. Figures

- 1.1 1. General Project Location.
2. NRHP Historic District Nomination Form.
3. Plan View of Project Area.
4. Corps Correspondence.
5. SHPO Comment.
6. Plans of the Corps' River Wall Excavations.
7. Documented River Wall Sections from Excavations.

XI. A Safety Plan shall be submitted and provided prior to commencement of fieldwork.

End

APPENDIX B:

Photographic Logs

American Resources Group, Ltd.

PHOTOGRAPHY LOG SHEETSITE NO. 13PK509CAMERA NO. 1

ROLL NO. _____

DATES 4/24/91FILM TYPE B/WLENSE 35 mmPHOTOGRAPHER J. Ross, J. Balsitis

Exp.	Date	Orient.	Description
1.	4/24/91	South	Site 13PK509
2.	"	South	"
3.	"	North	Test unit 2 profile
4.	"	North	"
5.	"	West	Test unit 1 planview
6.	"	West	"
7.	"	North	Trench A profile
8.	"	North	"
9.	"	East	Trench A
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American Resources Group, Ltd.

PHOTOGRAPHY LOG SHEETSITE NO. 13PK509
FILM TYPE B/WCAMERA NO. 2
LENSE 35 mmROLL NO. _____ DATES 4/22 & 4/24/91
PHOTOGRAPHER M. McNerney

Exp.	Date	Orient.	Description
1.	4/22/91	South	Site 13PK509
2.	"	"	"
3.	4/24/91	East	Backhoe at Trench A
4.	"	North	Checking Backdirt Trench A
5.	"	East	Backhoe and Embassy Suites Hotel
6.	"	South East	Test Unit 2
7.	"	South East	Test Unit 1
8.	"	South East	South Wall Trench A
9.	"	East	Brick Rubble Trench A
10.	"	West	Brick Rubble Trench A
11.	"	West	"
12.	"	South	Profile Trench B
13.	"	South	"
14.	"	North	Profile Trench B
15.	"	South East	Backdirt Trench A
16.	"	North East	J. Anderson profiling Trench A
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